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METHODS AND COMPOSITIONS FOR INHIBITION OF MEMBRANE
FUSION-ASSOCIATED EVENTS, INCLUDING HIV TRANSMISSION

Hepatitis B virus

Invent
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gi t.p.
5 This is a Continuation-In-Part of Serial No. 08/360,107 filed December 20, 1994, which is a Continuation-In-Part of Serial No. 08/255,208 filed June 7, 1994, which is a Continuation-In-Part of Serial No. 08/073,028 filed June 7, 1993, each of which is incorporated herein by reference in its entirety.

10 This invention was made with Government support under Grant No. AI-30411-02 awarded by the National Institutes of Health. The Government has certain rights in the invention.

SU CL 1. INTRODUCTION

- 15 The present invention relates, first, to DP178 (SEQ ID NO:1), a peptide corresponding to amino acids 638 to 673 of the HIV-1_{LAI} transmembrane protein (TM) gp41, and portions or analogs of DP178 (SEQ ID NO:1), which exhibit anti-membrane fusion capability,
- 20 antiviral activity, such as the ability to inhibit HIV transmission to uninfected CD-4⁺ cells, or an ability to modulate intracellular processes involving coiled-coil peptide structures. Further, the invention relates to the use of DP178 (SEQ ID NO:1) and DP178
- 25 portions and/or analogs as antifusogenic or antiviral compounds or as inhibitors of intracellular events involving coiled-coil peptide structures. The present invention also relates to peptides analogous to DP107
- 30 ~~(SEQ ID NO:25)~~, a peptide corresponding to amino acids 558 to 595 of the HIV-1_{LAI} transmembrane protein (TM) gp41, having amino acid sequences present in other viruses, such as enveloped viruses, and/or other organisms, and further relates to the uses of such peptides. These peptides exhibit anti-membrane fusion
- 35 capability, antiviral activity, or the ability to

modulate intracellular processes involving coiled-coil peptide structures. The present invention additionally relates to methods for identifying compounds that disrupt the interaction between DP178 and DP107, and/or between DP107-like and DP178-like peptides. Further, the invention relates to the use of the peptides of the invention as diagnostic agents. For example, a DP178 peptide may be used as an HIV subtype-specific diagnostic. The invention is demonstrated, first, by way of an Example wherein DP178 (SEQ ID:1), and a peptide whose sequence is homologous to DP178 are each shown to be potent, non-cytotoxic inhibitors of HIV-1 transfer to uninfected CD-4⁺ cells. The invention is further demonstrated by Examples wherein peptides having structural and/or amino acid motif similarity to DP107 and DP178 are identified in a variety of viral and nonviral organisms, and in examples wherein a number of such identified peptides derived from several different viral systems are demonstrated to exhibit antiviral activity.

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2. BACKGROUND OF THE INVENTION

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2.1 MEMBRANE FUSION EVENTS

Membrane fusion is a ubiquitous cell biological process (for a review, see White, J.M., 1992, Science 258:917-924). Fusion events which mediate cellular housekeeping functions, such as endocytosis, constitutive secretion, and recycling of membrane components, occur continuously in all eukaryotic cells.

Additional fusion events occur in specialized cells. Intracellularly, for example, fusion events are involved in such processes as occur in regulated exocytosis of hormones, enzymes and neurotransmitters.

Intercellularly, such fusion events feature prominently in, for example, sperm-egg fusion and myoblast fusion.

5 Fusion events are also associated with disease states. For example, fusion events are involved in the formation of giant cells during inflammatory reactions, the entry of all enveloped viruses into cells, and, in the case of human immunodeficiency virus (HIV), for example, are responsible for the virally induced cell-cell fusion which leads to cell death.

CL V/L 2.2. THE HUMAN IMMUNODEFICIENCY VIRUS

15 The human immunodeficiency virus (HIV) has been implicated as the primary cause of the slowly degenerative immune system disease termed acquired immune deficiency syndrome (AIDS) (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo, R. et al., 1984, Science 224:500-503). There are at least two distinct types of HIV: HIV-1 (Barre-Sinoussi, F. et al., 1983, Science 220:868-870; Gallo R. et al., 1984, Science 224:500-503) and HIV-2 (Clavel, F. et al., 1986, Science 233:343-346; Guyader, M. et al., 1987, Nature 326:662-669). Further, a large amount of genetic heterogeneity exists within populations of each of these types. Infection of human CD-4⁺ T-lymphocytes with an HIV virus leads to depletion of the cell type and eventually to opportunistic infections, neurological dysfunctions, neoplastic growth, and ultimately death.

30 HIV is a member of the lentivirus family of retroviruses (Teich, N. et al., 1984, RNA Tumor Viruses, Weiss, R. et al., eds., CSH-Press, pp. 949-956). Retroviruses are small enveloped viruses that contain a diploid, single-stranded RNA genome, and

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replicate via a DNA intermediate produced by a virally-encoded reverse transcriptase, an RNA-dependent DNA polymerase (Varmus, H., 1988, Science 240:1427-1439). Other retroviruses include, for example, oncogenic viruses such as human T-cell leukemia viruses (HTLV-I, -II, -III), and feline leukemia virus.

The HIV viral particle consists of a viral core, composed of capsid proteins, that contains the viral RNA genome and those enzymes required for early replicative events. Myristylated Gag protein forms an outer viral shell around the viral core, which is, in turn, surrounded by a lipid membrane enveloped derived from the infected cell membrane. The HIV enveloped surface glycoproteins are synthesized as a single 160 Kd precursor protein which is cleaved by a cellular protease during viral budding into two glycoproteins, gp41 and gp120. gp41 is a transmembrane protein and gp120 is an extracellular protein which remains non-covalently associated with gp41, possibly in a trimeric or multimeric form (Hammarskjold, M. and Rekosh, D., 1989, Biochem. Biophys. Acta 989:269-280).

HIV is targeted to CD-4⁺ cells because the CD-4 cell surface protein acts as the cellular receptor for the HIV-1 virus (Dalglish, A. et al., 1984, Nature 312:763-767; Klatzmann et al., 1984, Nature 312:767-768; Maddon et al., 1986, Cell 47:333-348). Viral entry into cells is dependent upon gp120 binding the cellular CD-4⁺ receptor molecules (McDougal, J.S. et al., 1986, Science 231:382-385; Maddon, P.J. et al., 1986, Cell 47:333-348) and thus explains HIV's tropism for CD-4⁺ cells, while gp41 anchors the enveloped glycoprotein complex in the viral membrane.

CL 0/2 2.3. HIV TREATMENT

HIV infection is pandemic and HIV associated diseases represent a major world health problem. Although considerable effort is being put into the
5 successful design of effective therapeutics, currently no curative anti-retroviral drugs against AIDS exist. In attempts to develop such drugs, several stages of the HIV life cycle have been considered as targets for therapeutic intervention (Mitsuya, H. et al., 1991,
10 FASEB J. 5:2369-2381). For example, virally encoded reverse transcriptase has been one focus of drug development. A number of reverse-transcriptase-targeted drugs, including 2',3'-dideoxynucleoside analogs such as AZT, ddI, ddC, and d4T have been
15 developed which have been shown to be active against HIV (Mitsuya, H. et al., 1991, Science 249:1533-1544). While beneficial, these nucleoside analogs are not curative, probably due to the rapid appearance of drug resistant HIV mutants (Lander, B. et al., 1989,
20 Science 243:1731-1734). In addition, the drugs often exhibit toxic side effects such as bone marrow suppression, vomiting, and liver function abnormalities.

Attempts are also being made to develop drugs
25 which can inhibit viral entry into the cell, the earliest stage of HIV infection. Here, the focus has thus far been on CD4, the cell surface receptor for HIV. Recombinant soluble CD4, for example, has been shown to inhibit infection of CD-4⁺ T-cells by some
30 HIV-1 strains (Smith, D.H. et al., 1987, Science 238:1704-1707). Certain primary HIV-1 isolates, however, are relatively less sensitive to inhibition by recombinant CD-4 (Daar, E. et al., 1990, Proc. Natl. Acad. Sci. USA 87:6574-6579). In addition,
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recombinant soluble CD-4 clinical trials have produced inconclusive results (Schooley, R. et al., 1990, Ann. Int. Med. 112:247-253; Kahn, J.O. et al., 1990, Ann. Int. Med. 112:254-261; Yarchoan, R. et al., 1989, Proc. Vth Int. Conf. on AIDS, p. 564, MCP 137).

5 The late stages of HIV replication, which involve crucial virus-specific secondary processing of certain viral proteins, have also been suggested as possible anti-HIV drug targets. Late stage processing is dependent on the activity of a viral protease, and
10 drugs are being developed which inhibit this protease (Erickson, J., 1990, Science 249:527-533). The clinical outcome of these candidate drugs is still in question.

15 Attention is also being given to the development of vaccines for the treatment of HIV infection. The HIV-1 enveloped proteins (gp160, gp120, gp41) have been shown to be the major antigens for anti-HIV antibodies present in AIDS patients (Barin, et al., 1985, Science 228:1094-1096). Thus far, therefore,
20 these proteins seem to be the most promising candidates to act as antigens for anti-HIV vaccine development. To this end, several groups have begun to use various portions of gp160, gp120, and/or gp41 as immunogenic targets for the host immune system.
25 See for example, Ivanoff, L. et al., U.S. Pat. No. 5,141,867; Saith, G. et al., WO 92/22,654; Shafferman, A., WO 91/09,872; Formoso, C. et al., WO 90/07,119. Clinical results concerning these candidate vaccines, however, still remain far in the future.

30 Thus, although a great deal of effort is being directed to the design and testing of anti-retroviral drugs, a truly effective, non-toxic treatment is still needed.

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3. SUMMARY OF THE INVENTION

The present invention relates, first, to DP178 (SEQ ID:1), a 36-amino acid synthetic peptide corresponding to amino acids 638 to 673 of the transmembrane protein (TM) gp41 from the HIV-1 isolate LAI (HIV-1_{LAI}), which exhibits potent anti-HIV-1 activity. As evidenced by the Example presented below, in Section 6, the DP178 (SEQ ID:1) antiviral activity is so high that, on a weight basis, no other known anti-HIV agent is effective at concentrations as low as those at which DP178 (SEQ ID:1) exhibits its inhibitory effects.

The invention further relates to those portions and analogs of DP178 which also show such antiviral activity, and/or show anti-membrane fusion capability, or an ability to modulate intracellular processes involving coiled-coil peptide structures. The term "DP178 analog" refers to a peptide which contains an amino acid sequence corresponding to the DP178 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and/or organisms other than HIV-1_{LAI}. Such DP178 analog peptides may, therefore, correspond to DP178-like amino acid sequences present in other viruses, such as, for example, enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such analogous DP178 peptides may also correspond to DP178-like amino acid sequences present in nonviral organisms.

The invention further relates to peptides DP107 ~~(SEQ ID NO:25)~~ analogs. DP107 is a peptide corresponding to amino acids 558-595 of the HIV-1_{LAI} transmembrane protein (TM) gp41. The term "DP107 analog" as used herein refers to a peptide which contains an amino acid sequence corresponding to the

DP107 peptide sequence present within the gp41 protein of HIV-1_{LAI}, but found in viruses and organisms other than HIV-1_{LAI}. Such DP107 analog peptides may, therefore, correspond to DP107-like amino acid sequences present in other viruses, such as, for example, 5 enveloped viruses, such as retroviruses other than HIV-1_{LAI}, as well as non-enveloped viruses. Further, such DP107 analog peptides may also correspond to DP107-like amino acid sequences present in nonviral organisms.

10 Further, the peptides of the invention include DP107 analog and DP178 analog peptides having amino acid sequences recognized or identified by the 107x178x4, ALLMOTI5 and/or PLZIP search motifs described herein.

15 The peptides of the invention may, for example, exhibit antifusogenic activity, antiviral activity, and/or may have the ability to modulate intracellular processes which involve coiled-coil peptide structures. With respect to the antiviral activity of 20 the peptides of the invention, such an antiviral activity includes, but is not limited to the inhibition of HIV transmission to uninfected CD-4⁺ cells. Additionally, the antifusogenic capability, antiviral activity or intracellular modulatory 25 activity of the peptides of the invention merely requires the presence of the peptides of the invention, and, specifically, does not require the stimulation of a host immune response directed against such peptides.

30 The peptides of the invention may be used, for example, as inhibitors of membrane fusion-associated events, such as, for example, the inhibition of human and non-human retroviral, especially HIV, transmission to uninfected cells. It is further contemplated that 35

the peptides of the invention may be used as modulators of intracellular events involving coiled-coil peptide structures.

5 The peptides of the invention may, alternatively, be used to identify compounds which may themselves exhibit antifusogenic, antiviral, or intracellular modulatory activity. Additional uses include, for example, the use of the peptides of the invention as organism or viral type and/or subtype-specific diagnostic tools.

10 The terms "antifusogenic" and "anti-membrane fusion", as used herein, refer to an agent's ability to inhibit or reduce the level of membrane fusion events between two or more moieties relative to the level of membrane fusion which occurs between said
15 moieties in the absence of the peptide. The moieties may be, for example, cell membranes or viral structures, such as viral envelopes or pili. The term "antiviral", as used herein, refers to the compound's ability to inhibit viral infection of cells, via, for
20 example, cell-cell fusion or free virus infection. Such infection may involve membrane fusion, as occurs in the case of enveloped viruses, or some other fusion event involving a viral structure and a cellular structure (e.g., such as the fusion of a viral pilus
25 and bacterial membrane during bacterial conjugation).

It is also contemplated that the peptides of the invention may exhibit the ability to modulate intracellular events involving coiled-coil peptide structures. "Modulate", as used herein, refers to a
30 stimulatory or inhibitory effect on the intracellular process of interest relative to the level or activity of such a process in the absence of a peptide of the invention.

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Embodiments of the invention are demonstrated below wherein an extremely low concentration of DP178 (SEQ ID:1), and very low concentrations of a DP178 homolog (SEQ ID:3) are shown to be potent inhibitors of HIV-1 mediated CD-4⁺ cell-cell fusion (i.e.,
5 syncytial formation) and infection of CD-4⁺ cells by cell-free virus. Further, it is shown that DP178 (SEQ ID:1) is not toxic to cells, even at concentrations 3 logs higher than the inhibitory DP-178 (SEQ ID:1) concentration.

10 The present invention is based, in part, on the surprising discovery that the DP107 and DP178 domains of the HIV gp41 protein non-covalently complex with each other, and that their interaction is required for
15 the normal infectivity of the virus. This discovery is described in the Example presented, below, in Section 8. The invention, therefore, further relates to methods for identifying antifusogenic, including
20 antiviral, compounds that disrupt the interaction between DP107 and DP178, and/or between DP107-like and DP178-like peptides.

Additional embodiments of the invention (specifically, the Examples presents in Sections 9-16 and 19-25, below) are demonstrated, below, wherein
25 peptides, from a variety of viral and nonviral sources, having structural and/or amino acid motif similarity to DP107 and DP178 are identified, and search motifs for their identification are described. Further, Examples (in Sections 17, 18, 25-29) are
30 presented wherein a number of the peptides of the invention are demonstrated exhibit substantial antiviral activity or activity predictive of antiviral activity.

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CL U/L. 3.1. DEFINITIONS

Peptides are defined herein as organic compounds comprising two or more amino acids covalently joined by peptide bonds. Peptides may be referred to with
5 respect to the number of constituent amino acids, i.e., a dipeptide contains two amino acid residues, a tripeptide contains three, etc. Peptides containing ten or fewer amino acids may be referred to as oligopeptides, while those with more than ten amino
10 acid residues are polypeptides. Such peptides may also include any of the modifications and additional amino and carboxy groups as are described herein.

Peptide sequences defined herein are represented by one-letter symbols for amino acid residues as
15 follows:

PO
A (alanine)
R (arginine)
N (asparagine)
D (aspartic acid)
C (cysteine)
20 Q (glutamine)
E (glutamic acid)
G (glycine)
H (histidine)
I (isoleucine)
L (leucine)
K (lysine)
M (methionine)
25 F (phenylalanine)
P (proline)
S (serine)
T (threonine)
W (tryptophan)
Y (tyrosine)
V (valine)

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4. BRIEF DESCRIPTION OF THE FIGURES

P FIG. 1. Amino acid sequence of DP178 (SEQ ID:1) derived from HIV_{LAI}; DP178 homologs derived from HIV-1_{SF2} (DP-185; SEQ ID:3), HIV-1_{RF} (SEQ ID:4), and HIV-1_{MN} (SEQ ID:5); DP178 homologs derived from amino acid sequences of two prototypic HIV-2 isolates, namely, HIV-2_{rod} (SEQ ID:6) and HIV-2_{NIHZ} (SEQ ID:7); control peptides: DP-180 (SEQ ID:2), a peptide incorporating the amino acid residues of DP178 in a scrambled sequence; DP-118 (SEQ ID:10) unrelated to DP178, which inhibits HIV-1 cell free virus infection; DP-125 (SEQ ID:8), unrelated to DP178, also inhibits HIV-1 cell free virus infection; DP-116 (SEQ ID:9), unrelated to DP178, is negative for inhibition of HIV-1 infection when tested using a cell-free virus infection assay. Throughout the figures, the one letter amino acid code is used.

P FIG. 2. Inhibition of HIV-1 cell-free virus infection by synthetic peptides. IC₅₀ refers to the concentration of peptide that inhibits RT production from infected cells by 50% compared to the untreated control. Control: the level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

P FIG. 3. Inhibition of HIV-1 and HIV-2 cell-free virus infection by the synthetic peptide DP178 (SEQ ID:1). IC₅₀: concentration of peptide that inhibits RT production by 50% compared to the untreated control. Control: Level of RT produced by untreated cell cultures infected with the same level of virus as treated cultures.

P FIG. 4A-4B. Fusion Inhibition Assays. FIG 4A: DP178 (SEQ ID:1) inhibition of HIV-1 prototypic isolate-mediated syncytial formation; data represents the number of virus-induced syncytial per cell. FIG.

4B: DP-180 (SEQ ID:2) represents a scrambled control peptide; DP-185 (SEQ ID:3) represents a DP178 homolog derived from HIV-1_{SF2} isolate; Control, refers to the number of syncytial produced in the absence of peptide.

5 FIG. 5. Fusion inhibition assay: HIV-1 vs. HIV-2. Data represents the number of virus-induced syncytial per well. ND: not done.

10 FIG. 6. Cytotoxicity study of DP178 (SEQ ID:1) and DP-116 (SEQ ID:9) on CEM cells. Cell proliferation data is shown.

15 FIG. 7. Schematic representation of HIV-gp41 and maltose binding protein (MBP)-gp41 fusion proteins. DP107 and DP178 are synthetic peptides based on the two putative helices of gp41. The letter P in the DP107 boxes denotes an Ile to Pro mutation at amino acid number 578. Amino acid residues are numbered according to Meyers et al., "Human Retroviruses and AIDS", 1991, Theoret. Biol. and Biophys. Group, Los Alamos Natl. Lab., Los Alamos, NM.
20 The proteins are more fully described, below, in Section 8.1.1.

 FIG. 8. A point mutation alters the conformation and anti-HIV activity of M41.

25 FIG. 9. Abrogation of DP178 anti-HIV activity. Cell fusion assays were carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41PΔ178.

30 FIG. 10. Binding of DP178 to leucine zipper of gp41 analyzed by FAb-D ELISA.

35 FIG. 11A-B. Models for a structural transition in the HIV-1 TM protein. Two models are proposed which indicate a structural transition from a native oligomer to a fusogenic state following a trigger event (possibly gp120 binding to CD4). Common

features of both models include (1) the native state is held together by noncovalent protein-protein interactions to form the heterodimer of gp120/41 and other interactions, principally through gp41 interactive sites, to form homo-oligomers on the virus surface of the gp120/41 complexes; (2) shielding of the hydrophobic fusogenic peptide at the N-terminus (F) in the native state; and (3) the leucine zipper domain (DP107) exists as a homo-oligomer coiled coil only in the fusogenic state. The major differences in the two models include the structural state (native or fusogenic) in which the DP107 and DP178 domains are complexed to each other. In the first model (FIG. 11A) this interaction occurs in the native state and in the second (FIG. 11B), it occurs during the fusogenic state. When triggered, the fusion complex in the model depicted in (A) is generated through formation of coiled-coil interactions in homologous DP107 domains resulting in an extended α -helix. This conformational change positions the fusion peptide for interaction with the cell membrane. In the second model (FIG. 11B), the fusogenic complex is stabilized by the association of the DP178 domain with the DP107 coiled-coil.

FIG. 12. Motif design using heptad repeat positioning of amino acids of known coiled-coils.

FIG. 13. Motif design using proposed heptad repeat positioning of amino acids of DP107 and DP178.

FIG. 14. Hybrid motif design crossing GCN4 and DP107.

FIG. 15. Hybrid motif design crossing GCN4 and DP178.

FIG. 16. Hybrid motif design 107x178x4, crossing DP107 and DP178. This motif was found to be

the most consistent at identifying relevant DP107-like and DP178-like peptide regions.

FIG. 17. Hybrid motif design crossing GCN4, DP107, and DP178.

5 FIG. 18. Hybrid motif design ALLMOTI5 crossing GCN4, DP107, DP178, c-Fos c-Jun, c-Myc, and Flu Loop 36.

FIG. 19. PLZIP motifs designed to identify N-terminal proline-leucine zipper motifs.

10 FIG. 20. Search results for HIV-1 (BRU isolate) enveloped protein gp41. ^(SEQ ID NO:90) Sequence search motif designations: Spades (♠): 107x178x4; Hearts (♥) ALLMOTI5; Clubs (♣): PLZIP; Diamonds (♦): transmembrane region (the putative transmembrane domains were identified using a PC/Gene program
15 designed to search for such peptide regions). Asterisk (*): Lupas method. The amino acid sequences identified by each motif are bracketed by the respective characters. Representative sequences chosen based on 107x178x4 searches are underlined and
20 in bold. DP107 and DP178 sequences are marked, and additionally double-underlined and italicized.

FIG. 21. Search results for human respiratory syncytial virus (RSV) strain A2 fusion glycoprotein Fl. ^(SEQ ID NO:91) Sequence search motif designations
25 are as in FIG. 20.

FIG. 22. Search results for simian immunodeficiency virus (SIV) enveloped protein gp41 (AGM3 isolate). ^(SEQ ID NO:92) Sequence search motif designations
30 are as in FIG. 20.

FIG. 23. Search results for canine distemper virus (strain Onderstepoort) fusion glycoprotein 1. ^(SEQ ID NO:93) Sequence search motif designations
35 are as in FIG. 20.

FIG. 24. Search results for newcastle disease virus (strain Australia-Victoria/32) fusion glycoprotein F1. ^(SEQ ID NO: 94) Sequence search motif designations are as in FIG. 20.

5 FIG. 25. Search results for human parainfluenza 3 virus (strain NIH 47885) fusion glycoprotein F1. ^(SEQ ID NO: 95) Sequence search motif designations are as in FIG. 20.

10 FIG. 26. Search results for influenza A virus (strain A/AICHI/2/68) hemagglutinin precursor HA2. ^(SEQ ID NO: 96) Sequence search designations are as in FIG. 20.

15 FIG. 27A-D. Respiratory Syncytial Virus (RSV) peptide ^(SEQ ID NO: 97) antiviral and circular dichroism data. FIG. 27A-B: Peptides derived from the F2 DP178/DP107-like region. ^{B2} Antiviral and CD data. FIG. 27C-D: Peptides derived from the F1 DP107-like region. ^{B3} Peptide and CD data.

Antiviral activity (AV) is represented by the following qualitative symbols:

- 20 "- ", negative antiviral activity;
"+/- ", antiviral activity at greater than 100µg/ml;
"+ ", antiviral activity at between 50-100µg/ml;
"++ ", antiviral activity at between 20-50µg/ml;
25 "+++ ", antiviral activity at between 1-20µg/ml;
"++++ ", antiviral activity at <1µg/ml.

CD data, referring to the level of helicity is represented by the following qualitative symbol:

- 30 "- ", no helicity;
"+ ", 25-50% helicity;
"++ ", 50-75% helicity;
"++++ " 75-100% helicity.

35 IC₅₀ refers to the concentration of peptide necessary to produce only 50% of the number of syncytial relative to infected control cultures

containing no peptide. IC₅₀ values were obtained using purified peptides only.

FIG. 28A-B. Respiratory Syncytial Virus (RSV) DP178-like region (F1) peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC₅₀ are as in FIG. 27A-D. IC₅₀ values were obtained using purified peptides only.

FIG. 29A-B. Peptides derived from the HPIV3 F1 DP107-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC₅₀ are as in FIG. 27A-D. Purified peptides were used to obtain IC₅₀ values, except where the values are marked by an asterisk (*), in which cases, the IC₅₀ values were obtained using a crude peptide preparation.

FIG. 29C. HPIV3 peptide T-184 CD spectrum at 1°C in 0.1M NaCl 10mM KPO₄, pH 7.0. The data demonstrates the peptide's helical secondary structure ($\theta_{222/208}=1.2$) over a wide range of concentrations (100-1500μM). This evidence is consistent with the peptide forming a helical coiled-coil structure.

FIG. 30A-B. Peptides derived from the HPIV3 F1 DP178-like region. Peptide antiviral and CD data. Antiviral symbols, CD symbols, and IC₅₀ are as in FIG. 27A-D. Purified peptides were used to obtain IC₅₀ values, except where the values are marked by an asterisk (*), in which cases, the IC₅₀ values were obtained using a crude peptide preparation.

FIG. 31. Motif search results for simian immunodeficiency virus (SIV) isolate MM251, enveloped polyprotein gp41. (SEQ ID NO:102) Sequence search designations are as in FIG. 20.

FIG. 32. Motif search results for Epstein-Barr Virus (Strain B95-8), glycoprotein gp110 precursor (designated gp115). (SEQ ID NO:103) BALF4. Sequence search designations are as in FIG. 20.

FIG. 33. Motif search results for Epstein-Barr Virus (Strain B95-8), BZLF1 trans-activator protein (designated EB1 or Zebra)^(SEQ ID NO:104). Sequence search designations are as in FIG. 20. Additionally, "e" refers to a well known DNA binding domain and "+" refers to a well known dimerization domain, as defined by Flemington and Speck (Flemington, E. and Speck, S.H., 1990, Proc. Natl. Acad. Sci. USA 87:9459-9463).

FIG. 34. Motif search results for measles virus (strain Edmonston), fusion glycoprotein F1₁^(SEQ ID NO:105). Sequence search designations are as in FIG. 20.

FIG. 35. Motif search results for Hepatitis B Virus (Subtype AYW), major surface antigen precursor^(SEQ ID NO:106). Sequence search designations are as in FIG. 20.

FIG. 36. Motif search results for simian Mason-Pfizer monkey virus, enveloped (TM) protein gp20₁^(SEQ ID NO:107). Sequence search designations are as in FIG. 20.

FIG. 37. Motif search results for Pseudomonas aeruginosa, fimbrial protein₁ (Pilin)₁^(SEQ ID NO:110)^(SEQ ID NO:108). Sequence search designations are as in FIG. 20.

FIG. 38. Motif search results for Neisseria gonorrhoeae fimbrial protein (Pilin)₁^(SEQ ID NO:109). Sequence search designations are as in FIG. 20.

FIG. 39. Motif search results for Hemophilus influenzae fimbrial protein. Sequence search designations are as in FIG. 20.

FIG. 40. Motif search results for Staphylococcus aureus, toxic shock syndrome toxin-1₁^(SEQ ID NO:111). Sequence search designations are as in FIG. 20.

FIG. 41. Motif search results for Staphylococcus aureus enterotoxin Type E₁^(SEQ ID NO:112). Sequence search designations are as in FIG. 20.

FIG. 42. Motif search results for Staphylococcus aureus enterotoxin A₁^(SEQ ID NO:113). Sequence search designations are as in FIG. 20.

FIG. 43. Motif search results for Escherichia coli, heat labile enterotoxin A₁. Sequence search designations are as in FIG. 20. (SEQ ID NO: 114)

5 FIG. 44. Motif search results for human c-fos proto-oncoprotein. Sequence search designations are as in FIG. 20. (SEQ ID NO: 115)

FIG. 45. Motif search results for human lupus KU autoantigen protein P70. Sequence search designations are as in FIG. 20. (SEQ ID NO: 116)

10 FIG. 46. Motif search results for human zinc finger protein 10. Sequence search designations are as in FIG. 20. (SEQ ID NO: 117)

15 FIG. 47. Measles virus (MeV) fusion protein DP178-like region antiviral and CD data. Antiviral symbols, CD symbols, and IC₅₀ are as in FIG. 27A-D. IC₅₀ values were obtained using purified peptides. [T-25270: (SEQ ID NO: 118); T-26840: (SEQ ID NO: 119)]

FIG. 48. Simian immunodeficiency virus (SIV) TM (fusion) protein DP178-like region antiviral data. Antiviral symbols are as in FIG. 27A-D "NT", not tested. (SEQ ID NO: 120)

20 FIG. 49A-C. DP178-derived peptide antiviral data. The peptides listed herein were derived from the region surrounding the HIV-1 BRU isolate DP178 region (e.g., gp41 amino acid residues 615-717).

25 In instances where peptides contained DP178 point mutations, the mutated amino acid residues are shown with a shaded background. In instances in which the test peptide has had an amino and/or carboxy-terminal group added or removed (apart from the standard amido- and acetyl- blocking groups found on such peptides),
30 such modifications are indicated. FIG. 49A: The column to the immediate right of the name of the test peptide indicates the size of the test peptide and points out whether the peptide is derived from a one amino acid peptide "walk" across the DP178 region.
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Insert
B7

The next column to the right indicates whether the test peptide contains a point mutation, while the column to its right indicates whether certain amino acid residues have been added to or removed from the DP178-derived amino acid sequence. FIG 49B: The column to the immediate right of the test peptide name indicates whether the peptide represents a DP178 truncation, the next column to the right points out whether the peptide contains a point mutation, and the column to its right indicates whether the peptide contains amino acids which have been added to or removed from the DP178 sequence itself. FIG. 49C: The column to the immediate right of the test peptide name indicates whether the test peptide contains a point mutation, while the column to its right indicates whether amino acid residues have been added to or removed from the DP178 sequence itself. IC₅₀ is as defined in FIG. 27A-D, and IC₅₀ values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC₅₀ was obtained using a crude peptide preparation.

FIG. 50. DP107 and DP107 gp41 region truncated peptide antiviral data. ^(SEQ ID NO: 201) IC₅₀ as defined in FIG. 27A-D, and IC₅₀ values were obtained using purified peptides except where marked with an asterisk (*), in which case the IC₅₀ was obtained using a crude peptide preparation.

FIG. 51A-B. Epstein-Barr virus Strain B95-8 BZLF1 DP178/DP107 analog region peptide walks and electrophoretic mobility shift assay results. The peptides ^{B8} (T-423 to T-446, FIG. 51A; T-447 to T-461, FIG. 51B) represent one amino acid residue "walks" through the EBV Zebra protein region from amino acid residue 173 to 246.

The amino acid residue within this region which corresponds to the first amino acid residue of each peptide is listed to the left of each peptide, while the amino acid residue within this region which corresponds to the last amino acid residue of each peptide is listed to the right of each peptide. The length of each test peptide is listed at the far right of each line, under the heading "Res".

"ACT" refers to a test peptide's ability to inhibit Zebra binding to its response element. "+" refers to a visible, but incomplete, abrogation of the response element/Zebra homodimer complex; "+++" refers to a complete abrogation of the complex; and "-" represents a lack of complex disruption.

FIG. 52A-B. Hepatitis B virus subtype AYW major surface antigen precursor S protein DP178/DP107 analog region and peptide walks. 52A depicts Domain I (S protein amino acid residues 174-220), which contains a potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain I. 52B depicts Domain II (S protein amino acid residues 233-291), which contains a second potential DP178/DP107 analog region. In addition, peptides are listed which represent one amino acid peptide "walks" through domain II.

DE CL 5. DETAILED DESCRIPTION OF THE INVENTION

Described herein are peptides which may exhibit antifusogenic activity, antiviral capability, and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. The peptides described include, first, DP178 (SEQ ID NO:1), a gp41-derived 36 amino acid peptide and fragments and analogs of DP178.

In addition, the peptides of the invention described herein include peptides which are DP107 analogs. DP107 (SEQ ID NO:25) is a 38 amino acid peptide corresponding to residues 558 to 595 of the HIV-1_{LAI} transmembrane (TM) gp41 protein. Such DP107 analogs may exhibit antifusogenic capability, antiviral activity or an ability to modulate intracellular processes involving coiled-coil structures.

Further, peptides of the invention include DP107 and DP178 are described herein having amino acid sequences recognized by the 107x178x4, ALLMOTI5, and PLZIP search motifs. Such motifs are also discussed.

Also described here are antifusogenic, antiviral, intracellular modulatory, and diagnostic uses of the peptides of the invention. Further, procedures are described for the use of the peptides of the invention for the identification of compounds exhibiting antifusogenic, antiviral or intracellular modulatory activity.

While not limited to any theory of operation, the following model is proposed to explain the potent anti-HIV activity of DP178, based, in part, on the experiments described in the Examples, infra. In the HIV protein, gp41, DP178 corresponds to a putative α -helix region located in the C-terminal end of the gp41 ectodomain, and appears to associate with a distal site on gp41 whose interactive structure is influenced by the leucine zipper motif, a coiled-coil structure, referred to as DP107. The association of these two domains may reflect a molecular linkage or "molecular clasp" intimately involved in the fusion process. It is of interest that mutations in the C-terminal α -helix motif of gp41 (i.e., the D178 domain) tend to enhance the fusion ability of gp41, whereas mutations

in the leucine zipper region (i.e., the DP107 domain) decrease or abolish the fusion ability of the viral protein. It may be that the leucine zipper motif is involved in membrane fusion while the C-terminal α -helix motif serves as a molecular safety to regulate the availability of the leucine zipper during virus-induced membrane fusion.

On the basis of the foregoing, two models are proposed of gp41-mediated membrane fusion which are schematically shown in FIG. 11A-B. The reason for proposing two models is that the temporal nature of the interaction between the regions defined by DP107 and DP178 cannot, as yet, be pinpointed. Each model envisions two conformations for gp41 - one in a "native" state as it might be found on a resting virion. The other in a "fusogenic" state to reflect conformational changes triggered following binding of gp120 to CD4 and just prior to fusion with the target cell membrane. The strong binding affinity between gp120 and CD4 may actually represent the trigger for the fusion process obviating the need for a pH change such as occurs for viruses that fuse within intracellular vesicles. The two major features of both models are: (1) the leucine zipper sequences (DP107) in each chain of oligomeric enveloped are held apart in the native state and are only allowed access to one another in the fusogenic state so as to form the extremely stable coiled-coils, and (2) association of the DP178 and DP107 sites as they exist in gp41 occur either in the native or fusogenic state. FIG. 11A depicts DP178/DP107 interaction in the native state as a molecular clasp. On the other hand, if one assumes that the most stable form of the enveloped occurs in the fusogenic state, the model in FIG. 11B can be considered.

When synthesized as peptides, both DP107 and DP178 are potent inhibitors of HIV infection and fusion, probably by virtue of their ability to form complexes with viral gp41 and interfere with its fusogenic process; e.g., during the structural transition of the viral protein from the native structure to the fusogenic state, the DP178 and DP107 peptides may gain access to their respective binding sites on the viral gp41, and exert a disruptive influence. DP107 peptides which demonstrate anti-HIV activity are described in Applicants' co-pending application Serial No. 08/264,531, filed June 23, 1994, which is incorporated by reference herein in its entirety.

As shown in the Examples, infra, a truncated recombinant gp41 protein corresponding to the ectodomain of gp41 containing both DP107 and DP178 domains (excluding the fusion peptide, transmembrane region and cytoplasmic domain of gp41) did not inhibit HIV-1 induced fusion. However, when a single mutation was introduced to disrupt the coiled-coil structure of the DP107 domain -- a mutation which results in a total loss of biological activity of DP107 peptides -- the inactive recombinant protein was transformed to an active inhibitor of HIV-1 induced fusion. This transformation may result from liberation of the potent DP178 domain from a molecular clasp with the leucine zipper, DP107 domain.

For clarity of discussion, the invention will be described primarily for DP178 peptide inhibitors of HIV. However, the principles may be analogously applied to other viruses, both enveloped and nonenveloped, and to other non-viral organisms.

CL v/L 5.1. DP178 AND DP178-LIKE PEPTIDES

The DP178 peptide (SEQ ID:1) of the invention corresponds to amino acid residues 638 to 673 of the transmembrane protein gp41 from the HIV-1_{LAI} isolate, and has the 36 amino acid sequence (reading from amino to carboxy terminus): *PS.*

5
ti NH₂-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-COOH (SEQ ID:1) *PS.*

P In addition to the full-length DP178 (SEQ ID:1) 36-mer, the peptides of the invention may include
10 truncations of the DP178 (SEQ ID:1) peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes involving coiled-coil peptide structures. Truncations
15 of DP178 (SEQ ID:1) peptides may comprise peptides of between 3 and 36 amino acid residues (*i.e.*, peptides ranging in size from a tripeptide to a 36-mer polypeptide), as shown in Tables I and IA, below. Peptide sequences in these tables are listed from
20 amino (left) to carboxy (right) terminus. "X" may represent an amino group (-NH₂) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC)
25 group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently
30 attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

35

TABLE I
DP178 (SEQ ID:1) CARBOXY TRUNCATIONS

T, 0270

	X-YTS-Z
	X-YTSL-Z
	X-YTSLI-Z
	X-YTSLIH-Z
5	X-YTSLIHS-Z
	X-YTSLIHSL-Z
	X-YTSLIHSLI-Z
	X-YTSLIHSLIE-Z
	X-YTSLIHSLIEE-Z
	X-YTSLIHSLIEES-Z
	X-YTSLIHSLIEESQ-Z
10	X-YTSLIHSLIEESQN-Z
	X-YTSLIHSLIEESQNNQ-Z
	X-YTSLIHSLIEESQNNQQ-Z
	X-YTSLIHSLIEESQNNQQE-Z
	X-YTSLIHSLIEESQNNQQEK-Z
	X-YTSLIHSLIEESQNNQQEKN-Z
	X-YTSLIHSLIEESQNNQQEKNE-Z
	X-YTSLIHSLIEESQNNQQEKNEQ-Z
15	X-YTSLIHSLIEESQNNQQEKNEQE-Z
	X-YTSLIHSLIEESQNNQQEKNEQEL-Z
	X-YTSLIHSLIEESQNNQQEKNEQELL-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLE-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLEL-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELD-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDK-Z
20	X-YTSLIHSLIEESQNNQQEKNEQELLELDKW-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDKWA-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDKWAS-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDKWASL-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDKWASLW-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDKWASLWN-Z
	X-YTSLIHSLIEESQNNQQEKNEQELLELDKWASLWNWF-Z

25
p The one letter amino acid code is used.

p Additionally,

30 "X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

p
35 "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IA
DP178 (SEQ ID:1) AMINO TRUNCATIONS

	X-NWF-Z
	X-WNWF-Z
	X-LWNWF-Z
	X-SLWNWF-Z
5	X-ASLWNWF-Z
	X-WASLWNWF-Z
	X-KWASLWNWF-Z
	X-DKWASLWNWF-Z
	X-LDKWASLWNWF-Z
	X-ELDKWASLWNWF-Z
	X-LLELDKWASLWNWF-Z
10	X-ELLELDKWASLWNWF-Z
	X-QELLELDKWASLWNWF-Z
	X-EQELLELDKWASLWNWF-Z
	X-NEQELLELDKWASLWNWF-Z
	X-KNEQELLELDKWASLWNWF-Z
	X-EKNEQELLELDKWASLWNWF-Z
	X-QEKNEQELLELDKWASLWNWF-Z
15	X-QQEKNEQELLELDKWASLWNWF-Z
	X-NQQEKNEQELLELDKWASLWNWF-Z
	X-QNQQEKNEQELLELDKWASLWNWF-Z
	X-SQNQQEKNEQELLELDKWASLWNWF-Z
	X-ESQNQQEKNEQELLELDKWASLWNWF-Z
	X-EESQNQQEKNEQELLELDKWASLWNWF-Z
	X-IEESQNQQEKNEQELLELDKWASLWNWF-Z
20	X-LIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-SLIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-HSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-IHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-LIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-SLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-TSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z
	X-YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF-Z

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P

The one letter amino acid code is used.

P

Additionally,

30

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP178-like peptides. "DP178-like", as used herein, refers, first, to DP178 and DP178 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-178-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP178. The DP178-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP178-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP178-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP178 peptides of the invention. Utilizing the DP178 and DP178 analog sequences described herein, the skilled artisan can readily compile DP178 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP178 (SEQ ID:1) peptide sequence with amino acids possessing
5 dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The
10 insertions may be made at the carboxy or amino terminal end of the DP178 or DP178 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that
15 insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP178 (SEQ.ID:1) or DP178
20 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to
25 modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein
30 regions either amino to or carboxy to the actual DP178 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP178
35 region of the gp41 protein.

Deletions of DP178 (SEQ ID:1) or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP178 or DP178-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP178 (SEQ.ID:1) or DP178 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are further described, below, in Section 5.3.

20 *CL vlc* 5.2. DP107 AND DP107-LIKE PEPTIDES

Further, the peptides of the invention include peptides having amino acid sequences corresponding to DP107 analogs. DP107 is a 38 amino acid peptide which exhibits potent antiviral activity, and corresponds to residues 558 to 595 of HIV-1_{LAI} transmembrane (TM) gp41 protein, as shown here: *PS*

ti NH₂-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-COOH *PS*
~~(SEQ ID:25)~~

30 *P* In addition to the full-length DP107 ~~(SEQ ID:25)~~ 38-mer, the peptides of the invention may include truncations of the DP107 ~~(SEQ ID:25)~~ peptide which exhibit antifusogenic activity, antiviral activity and/or the ability to modulate intracellular processes

involving coiled-coil peptide structures. Truncations of DP107 (~~SEQ ID:25~~) peptides may comprise peptides of between 3 and 38 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 38-mer polypeptide), as shown in Tables II and IIA, below.

5 Peptide sequences in these tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group ($-NH_2$) and "Z" may represent a carboxyl ($-COOH$) group. Alternatively, "X" may represent a hydrophobic group, including but not

10 limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; or a covalently attached macromolecular group, including but not limited to a lipid-fatty acid

15 conjugate, polyethylene glycol, carbohydrate or peptide group. Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached macromolecular group, including but not

20 limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

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TABLE II
DP107 - (SEQ ID: 25) CARBOXY TRUNCATIONS

T0330

	X-NNL-Z
	X-NNLL-Z
	X-NNLLR-Z
5	X-NNLLRA-Z
	X-NNLLRAI-Z
	X-NNLLRAIE-Z
	X-NNLLRAIEA-Z
	X-NNLLRAIEAQ-Z
	X-NNLLRAIEAQQ-Z
	X-NNLLRAIEAQQH-Z
10	X-NNLLRAIEAQQHL-Z
	X-NNLLRAIEAQQHLL-Z
	X-NNLLRAIEAQQHLLQ-Z
	X-NNLLRAIEAQQHLLQL-Z
	X-NNLLRAIEAQQHLLQLT-Z
	X-NNLLRAIEAQQHLLQLTV-Z
	X-NNLLRAIEAQQHLLQLTVW-Z
	X-NNLLRAIEAQQHLLQLTVWQ-Z
15	X-NNLLRAIEAQQHLLQLTVWQI-Z
	X-NNLLRAIEAQQHLLQLTVWQIK-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQ-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQL-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQ-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQA-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQAR-Z
20	X-NNLLRAIEAQQHLLQLTVWQIKQLQARI-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARIL-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILA-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAV-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVE-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERY-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYL-Z
25	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLK-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKD-Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-Z

P The one letter amino acid code is used.

P Additionally,

30 "X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

P³⁵ "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IIA
DP178-(SEQ ID:25)-AMINO TRUNCATIONS

T,0340

	X-KDQ-	Z
	X-LKDQ-	Z
	X-YLKDQ-	Z
5	X-RYLKDQ-	Z
	X-ERYLKDQ-	Z
	X-VERYLKDQ-	Z
	X-AVERYLKDQ-	Z
	X-LAVERYLKDQ-	Z
	X-ILAVERYLKDQ-	Z
	X-RILAVERYLKDQ-	Z
10	X-ARILAVERYLKDQ-	Z
	X-QARILAVERYLKDQ-	Z
	X-LQARILAVERYLKDQ-	Z
	X-QLQARILAVERYLKDQ-	Z
	X-KQLQARILAVERYLKDQ-	Z
	X-IKQLQARILAVERYLKDQ-	Z
	X-QIKQLQARILAVERYLKDQ-	Z
15	X-WQIKQLQARILAVERYLKDQ-	Z
	X-VWQIKQLQARILAVERYLKDQ-	Z
	X-TVWQIKQLQARILAVERYLKDQ-	Z
	X-LTVWQIKQLQARILAVERYLKDQ-	Z
	X-QLTVWQIKQLQARILAVERYLKDQ-	Z
	X-LQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-LLQLTVWQIKQLQARILAVERYLKDQ-	Z
20	X-HLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-QHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-QQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-AQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-EAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-IEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-AIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-RAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-LRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
25	X-LLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-NLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z
	X-NNLLRAIEAQQHLLQLTVWQIKQLQARILAVERYLKDQ-	Z

p The one letter amino acid code is used.

p Additionally,

30 "X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

35 p "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

The peptides of the invention also include DP107-like peptides. "DP107-like", as used herein, refers, first, to DP107 and DP107 truncations which contain one or more amino acid substitutions, insertions and/or deletions. Second, "DP-107-like" refers to peptide sequences identified or recognized by the ALLMOTI5, 107x178x4 and PLZIP search motifs described herein, having structural and/or amino acid motif similarity to DP107. The DP107-like peptides of the invention may exhibit antifusogenic or antiviral activity, or may exhibit the ability to modulate intracellular processes involving coiled-coil peptides. Further, such DP107-like peptides may possess additional advantageous features, such as, for example, increased bioavailability, and/or stability, or reduced host immune recognition.

HIV-1 and HIV-2 enveloped proteins are structurally distinct, but there exists a striking amino acid conservation within the DP107-corresponding regions of HIV-1 and HIV-2. The amino acid conservation is of a periodic nature, suggesting some conservation of structure and/or function. Therefore, one possible class of amino acid substitutions would include those amino acid changes which are predicted to stabilize the structure of the DP107 peptides of the invention. Utilizing the DP107 and DP107 analog sequences described herein, the skilled artisan can readily compile DP107 consensus sequences and ascertain from these, conserved amino acid residues which would represent preferred amino acid substitutions.

The amino acid substitutions may be of a conserved or non-conserved nature. Conserved amino acid substitutions consist of replacing one or more amino acids of the DP107 (~~SEQ ID:25~~) peptide sequence with amino acids of similar charge, size, and/or

hydrophobicity characteristics, such as, for example, a glutamic acid (E) to aspartic acid (D) amino acid substitution. Non-conserved substitutions consist of replacing one or more amino acids of the DP107 (SEQ ID:25) peptide sequence with amino acids possessing
5 dissimilar charge, size, and/or hydrophobicity characteristics, such as, for example, a glutamic acid (E) to valine (V) substitution.

Amino acid insertions may consist of single amino acid residues or stretches of residues. The
10 insertions may be made at the carboxy or amino terminal end of the DP107 or DP107 truncated peptides, as well as at a position internal to the peptide. Such insertions will generally range from 2 to 15 amino acids in length. It is contemplated that
15 insertions made at either the carboxy or amino terminus of the peptide of interest may be of a broader size range, with about 2 to about 50 amino acids being preferred. One or more such insertions may be introduced into DP107 (~~SEQ ID:25~~) or DP107
20 truncations, as long as such insertions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to
25 modulate intracellular processes involving coiled-coil peptide structures.

Preferred amino or carboxy terminal insertions are peptides ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein
30 regions either amino to or carboxy to the actual DP107 gp41 amino acid sequence, respectively. Thus, a preferred amino terminal or carboxy terminal amino acid insertion would contain gp41 amino acid sequences found immediately amino to or carboxy to the DP107
35 region of the gp41 protein.

Deletions of DP107 ~~(SEQ ID:25)~~ or DP178 truncations are also within the scope of the invention. Such deletions consist of the removal of one or more amino acids from the DP107 or DP107-like peptide sequence, with the lower limit length of the resulting peptide sequence being 4 to 6 amino acids. Such deletions may involve a single contiguous or greater than one discrete portion of the peptide sequences. One or more such deletions may be introduced into DP107 ~~(SEQ ID:25)~~ or DP107 truncations, as long as such deletions result in peptides which may still be recognized by the 107x178x4, ALLMOTI5 or PLZIP search motifs described herein, or may, alternatively, exhibit antifusogenic or antiviral activity, or exhibit the ability to modulate intracellular processes involving coiled-coil peptide structures.

DP107 and DP107 truncations are more fully described in Applicants' co-pending U.S. Patent Application Ser. No. 08/374,666, filed January 27, 1995, and which is incorporated herein by reference in its entirety. DP107 analogs are further described, below, in Section 5.3.

CLV/L 5.3. DP107 and DP178 ANALOGS
p Peptides corresponding to analogs of the DP178, DP178 truncations, DP107 and DP107 truncation sequences of the invention, described, above, in Sections 5.1 and 5.2 may be found in other viruses, including, for example, non-HIV-1_{LAI} enveloped viruses, non-enveloped viruses and other non-viral organisms.

p The term "analog", as used herein, refers to a peptide which is recognized or identified via the 107x178x4, ALLMOTI5 and/or PLZIP search strategies discussed below. Further, such peptides may exhibit antifusogenic capability, antiviral activity, or the

ability to modulate intracellular processes involving coiled-coil structures.

Such DP178 and DP107 analogs may, for example, correspond to peptide sequences present in TM proteins of enveloped viruses and may, additionally correspond
5 to peptide sequences present in non enveloped and non-viral organisms. Such peptides may exhibit antifusogenic activity, antiviral activity, most particularly antiviral activity which is specific to the virus in which their native sequences are found,
10 or may exhibit an ability to modulate intracellular processes involving coiled-coil peptide structures.

DP178 analogs are peptides whose amino acid sequences are comprised of the amino acid sequences of peptide regions of, for example, other (i.e., other
15 than HIV-1_{LAI}) viruses that correspond to the gp41 peptide region from which DP178 (SEQ ID:1) was derived. Such viruses may include, but are not limited to, other HIV-1 isolates and HIV-2 isolates. DP178 analogs derived from the corresponding gp41
20 peptide region of other (i.e., non HIV-1_{LAI}) HIV-1 isolates may include, for example, peptide sequences as shown below. PS.

ti' 25 NH₂-YTNTIYTLLEESQNQQEKNEQEELLELDKWASLWNWF-COOH (DP-185; SEQ ID:3); PS

ti' NH₂-YTGIIYNLLEESQNQQEKNEQEELLELDKWANLWNWF-COOH (SEQ ID:4); PS.

ti' 30 NH₂-YTSLIYSLLEKSQIQQEKNEQEELLELDKWASLWNWF-COOH (SEQ ID:5). PS.

PS SEQ ID:3 (DP-185), SEQ ID:4, and SEQ ID:5 are derived from HIV-1_{SF2}, HIV-1_{RF}, and HIV-1_{MN} isolates, respectively. Underlined amino acid residues refer to
35 those residues that differ from the corresponding position in the DP178 (SEQ ID:1) peptide. One such

DP178 analog, DP-185 (SEQ ID:3), is described in the Example presented in Section 6, below, where it is demonstrated that DP-185 (SEQ ID:3) exhibits antiviral activity. The DP178 analogs of the invention may also include truncations, as described above. Further, the
5 analogs of the invention modifications such those described for DP178 analogs in Section 5.1., above. It is preferred that the DP178 analogs of the invention represent peptides whose amino acid sequences correspond to the DP178 region of the gp41
10 protein, it is also contemplated that the peptides of the invention may, additionally, include amino sequences, ranging from about 2 to about 50 amino acid residues in length, corresponding to gp41 protein regions either amino to or carboxy to the actual DP178
15 amino acid sequence.

Striking similarities, as shown in FIG. 1, exist within the regions of HIV-1 and HIV-2 isolates which correspond to the DP178 sequence. A DP178 analog derived from the HIV-2_{NIH} isolate has the 36 amino acid
20 sequence (reading from amino to carboxy terminus): PS.

ti NH₂-LEANISQSLEQAQIQQEKNNMYELQKLNSWDVFTNWL-COOH (SEQ ID:7) PS -

PS 25 Table III and Table IV show some possible truncations of the HIV-2_{NIH} DP178 analog, which may comprise peptides of between 3 and 36 amino acid residues (i.e., peptides ranging in size from a tripeptide to a 36-mer polypeptide). Peptide sequences in these
30 tables are listed from amino (left) to carboxy (right) terminus. "X" may represent an amino group (-NH₂) and "Z" may represent a carboxyl (-COOH) group. Alternatively, "X" may represent a hydrophobic group, including but not limited to carbobenzyl, dansyl, or T-butoxycarbonyl; an acetyl group; a 9-
35 fluorenylmethoxy-carbonyl (Fmoc) group; or a

covalently attached macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group.

Further, "Z" may represent an amido group; a T-butoxycarbonyl group; or a covalently attached
5 macromolecular group, including but not limited to a lipid-fatty acid conjugate, polyethylene glycol, carbohydrate or peptide group. A preferred "X" or "Z" macromolecular group is a peptide group.

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TABLE III

HIV-2_{NIH2} DP178 analog carboxy truncations.

T,0410

5 X-LEA-Z
X-LEAN-Z
X-LEANI-Z
X-LEANIS-Z
X-LEANISQ-Z
X-LEANISQS-Z
X-LEANISQSL-Z
X-LEANISQSLE-Z
X-LEANISQSLEQ-Z
X-LEANISQSLEQA-Z
X-LEANISQSLEQAQ-Z
10 X-LEANISQSLEQAQI-Z
X-LEANISQSLEQAQIQ-Z
X-LEANISQSLEQAQIQQ-Z
X-LEANISQSLEQAQIQQE-Z
X-LEANISQSLEQAQIQQEK-Z
X-LEANISQSLEQAQIQQEKN-Z
X-LEANISQSLEQAQIQQEKNM-Z
X-LEANISQSLEQAQIQQEKNMY-Z
15 X-LEANISQSLEQAQIQQEKNMYE-Z
X-LEANISQSLEQAQIQQEKNMYEL-Z
X-LEANISQSLEQAQIQQEKNMYELQ-Z
X-LEANISQSLEQAQIQQEKNMYELQK-Z
X-LEANISQSLEQAQIQQEKNMYELQKL-Z
X-LEANISQSLEQAQIQQEKNMYELQKLN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNS-Z
20 X-LEANISQSLEQAQIQQEKNMYELQKLNSW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWD-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDV-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVF-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFT-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTN-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNW-Z
X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

25 p The one letter amino acid code is used.

p Additionally,

30 "X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

p 35 "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE IV

HIV-2_{NH2} DP178 analog amino truncations.

T,0420

	X-NWL-Z
	X-TNWL-Z
	X-FTNWL-Z
	X-VFTNWL-Z
5	X-DVFTNWL-Z
	X-WDVFTNWL-Z
	X-SWDVFTNWL-Z
	X-NSWDVFTNWL-Z
	X-LNSWDVFTNWL-Z
	X-KLNSWDVFTNWL-Z
	X-QKLNSWDVFTNWL-Z
10	X-LQKLNSWDVFTNWL-Z
	X-ELQKLNSWDVFTNWL-Z
	X-YELQKLNSWDVFTNWL-Z
	X-MYELQKLNSWDVFTNWL-Z
	X-NMYELQKLNSWDVFTNWL-Z
	X-KNMYELQKLNSWDVFTNWL-Z
	X-EKNMYELQKLNSWDVFTNWL-Z
15	X-QEKNMYELQKLNSWDVFTNWL-Z
	X-QQEKNMYELQKLNSWDVFTNWL-Z
	X-IQQEKNMYELQKLNSWDVFTNWL-Z
	X-QIQQEKNMYELQKLNSWDVFTNWL-Z
	X-AQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-QAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-EQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-LEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
20	X-SLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-QSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-ISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-NISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-ANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-EANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z
	X-LEANISQSLEQAQIQQEKNMYELQKLNSWDVFTNWL-Z

25

P

The one letter amino acid code is used.

P

Additionally,

30

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

P

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"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

DP178 and DP107 analogs are recognized or identified, for example, by utilizing one or more of the 107x178x4, ALLMOTI5 or PLZIP computer-assisted search strategies described and demonstrated, below, in the Examples presented in Sections 9 through 16 and 19 through 25. The search strategy identifies additional peptide regions which are predicted to have structural and/or amino acid sequence features similar to those of DP107 and/or DP178.

The search strategies are described fully, below, in the Example presented in Section 9. While this search strategy is based, in part, on a primary amino acid motif deduced from DP107 and DP178, it is not based solely on searching for primary amino acid sequence homologies, as such protein sequence homologies exist within, but not between major groups of viruses. For example, primary amino acid sequence homology is high within the TM protein of different strains of HIV-1 or within the TM protein of different isolates of simian immunodeficiency virus (SIV). Primary amino acid sequence homology between HIV-1 and SIV, however, is low enough so as not to be useful. It is not possible, therefore, to find peptide regions similar to DP107 or DP178 within other viruses, or within non-viral organisms, whether structurally, or otherwise, based on primary sequence homology, alone.

Further, while it would be potentially useful to identify primary sequence arrangements of amino acids based on, for example, the physical chemical characteristics of different classes of amino acids rather than based on the specific amino acids themselves, such search strategies have, until now, proven inadequate. For example, a computer algorithm designed by Lupas et al. to identify coiled-coil propensities of regions within proteins (Lupas, A., et al., 1991 Science 252:1162-1164) is inadequate for

identifying protein regions analogous to DP107 or DP178.

Specifically, analysis of HIV-1 gp160 (containing both gp120 and gp41) using the Lupas algorithm does not identify the coiled-coil region within DP107. It
5 does, however, identify a region within DP178 beginning eight amino acids N-terminal to the start of DP178 and ending eight amino acids from the C-terminus. The DP107 peptide has been shown
10 experimentally to form a stable coiled coil. A search based on the Lupas search algorithm, therefore, would not have identified the DP107 coiled-coil region. Conversely, the Lupas algorithm identified the DP178 region as a potential coiled-coil motif. However, the
15 peptide derived from the DP178 region failed to form a coiled coil in solution.

A possible explanation for the inability of the Lupas search algorithm to accurately identify coiled-coil sequences within the HIV-1 TM, is that the Lupas algorithm is based on the structure of coiled coils
20 from proteins that are not structurally or functionally similar to the TM proteins of viruses, antiviral peptides (e.g. DP107 and DP178) of which are an object of this invention.

The computer search strategy of the invention, as
25 demonstrated in the Examples presented below, in Sections 9 through 16 and 19 through 25, successfully identifies regions of proteins similar to DP107 or DP178. This search strategy was designed to be used with a commercially-available sequence database
30 package, preferably PC/Gene.

A series of search motifs, the 107x178x4, ALLMOTI5 and PLZIP motifs, were designed and engineered to range in stringency from strict to
35 broad, as discussed in this Section and in Section 9, with 107x178x4 being preferred. The sequences

identified via such search motifs, such as those listed in Tables V-XIV, below, potentially exhibit antifusogenic, such as antiviral, activity, may additionally be useful in the identification of antifusogenic, such as antiviral, compounds, and are
5 intended to be within the scope of the invention.

Coiled-coiled sequences are thought to consist of heptad amino acid repeats. For ease of description, the amino acid positions within the heptad repeats are sometimes referred to as A through G, with the first
10 position being A, the second B, etc. The motifs used to identify DP107-like and DP178-like sequences herein are designed to specifically search for and identify such heptad repeats. In the descriptions of each of the motifs described, below, amino acids enclosed by
15 brackets, i.e., [], designate the only amino acid residues that are acceptable at the given position, while amino acids enclosed by braces, i.e., {}, designate the only amino acids which are unacceptable at the given heptad position. When a set of bracketed
20 or braced amino acids is followed by a number in parentheses i.e., (), it refers to the number of subsequent amino acid positions for which the designated set of amino acids hold, e.g, a (2) means "for the next two heptad amino acid positions".

25 The ALLMOTI5 is written as follows: P S .

t i { CDGHP } - { CFP } (2) - { CDGHP } - { CFP } (3) - P S
{ CDGHP } - { CFP } (2) - { CDGHP } - { CFP } (3) - P S
{ CDGHP } - { CFP } (2) - { CDGHP } - { CFP } (3) - P S
{ CDGHP } - { CFP } (2) - { CDGHP } - { CFP } (3) - P S
{ CDGHP } - { CFP } (2) - { CDGHP } - { CFP } (3) - P S .

30 P Translating this motif, it would read: "at the first (A) position of the heptad, any amino acid residue except C, D, G, H, or P is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, or P is acceptable, at the fourth
35 heptad position (D), any amino acid residue except C,

D, G, H, or P is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, or P is acceptable. This motif is designed to search for five consecutive heptad repeats (thus the repeat of the first line five times), meaning that it searches for 35-mer sized peptides. It may also be designed to search for 28-mers, by only repeating the initial motif four times. With respect to the ALLMOTI5 motif, a 35-mer search is preferred. Those viral (non-bacteriophage) sequences identified via such an ALLMOTI5 motif are listed in Table V, below, at the end of this Section. The viral sequences listed in Table V potentially exhibit antiviral activity, may be useful in the the identification of antiviral compounds, and are intended to be within the scope of the invention. In those instances wherein a single gene exhibits greater than one sequence recognized by the ALLMOTI5 search motif, the amino acid residue numbers of these sequences are listed under "Area 2", Area 3", etc. This convention is used for each of the Tables listed, below, at the end of this Section.

The 107x178x4 motif is written as follows: $\begin{matrix} PS \\ + \quad t \quad i \\ 25 \left\{ \begin{array}{l} [E F I K L N Q S T V W Y] - \{ C F M P \} (2) - [E F I K L N Q S T V W Y] - \{ C F M P \} (3) - \\ [E F I K L N Q S T V W Y] - \{ C F M P \} (2) - [E F I K L N Q S T V W Y] - \{ C F M P \} (3) - \\ [E F I K L N Q S T V W Y] - \{ C F M P \} (2) - [E F I K L N Q S T V W Y] - \{ C F M P \} (3) - \\ [E F I K L N Q S T V W Y] - \{ C F M P \} (2) - [E F I K L N Q S T V W Y] - \{ C F M P \} (3) - \end{array} \right. \end{matrix}$

Translating this motif, it would read: "at the first (A) position of the heptad, only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next two (B,C) amino acid positions, any amino acid residue except C, F, M or P is acceptable, at the fourth position (D), only amino acid residue E, F, I, K, L, N, Q, S, T, V, W, or Y is acceptable, at the next three (E, F, G) amino acid positions, any amino acid residue except C, F, M or P is acceptable. This motif is designed to search for

four consecutive heptad repeats (thus the repeat of the first line four times), meaning that it searches for 28-mer sized peptides. It may also be designed to search for 35-mers, by repeating the initial motif five times. With respect to the 107x178x4 motif, a
5 28-mer search is preferred.

Those viral (non-bacteriophage) sequences identified via such a 107x178x4 motif are listed in Table VI, below, at the end of this Section, with those viral (non-bacteriophage) sequences listed in
10 Table VII, below at the end of this Section, being preferred.

The 107x178x4 search motif was also utilized to identify non-viral procaryotic protein sequences, as listed in Table VIII, below, at the end of this
15 Section. Further, this search motif was used to reveal a number of human proteins. The results of this human protein 107x178x4 search is listed in Table IX, below, at the end of this Section. The sequences listed in Tables VIII and IX, therefore, reveal
20 peptides which may be useful as antifusogenic compounds or in the identification of antifusogenic compounds, and are intended to be within the scope of the invention.

The PLZIP series of motifs are as listed in FIG.
25 19. These motifs are designed to identify leucine zipper coiled-coil like heptads wherein at least one proline residue is present at some predefined distance N-terminal to the repeat. These PLZIP motifs find regions of proteins with similarities to HIV-1 DP178
30 generally located just N-terminal to the transmembrane anchor. These motifs may be translated according to the same convention described above. Each line depicted in FIG. 19 represents a single, complete search motif. "X" in these motifs refers to any amino
35 acid residue. In instances wherein a motif contains

two numbers within parentheses, this refers to a variable number of amino acid residues. For example, X (1,12) is translated to "the next one to twelve amino acid residues, inclusive, may be any amino acid".

5 Tables X through XIV, below, at the end of this Section, list sequences identified via searches conducted with such PLZIP motifs. Specifically, Table X lists viral sequences identified via PCTLZIP, P1CTLZIP and P2CTLZIP search motifs, Table XI lists
10 viral sequences identified via P3CTLZIP, P4CTLZIP, P5CTLZIP and P6CTLZIP search motifs, Table XII lists viral sequences identified via P7CTLZIP, P8CTLZIP and P9CTLZIP search motifs, Table XIII lists viral sequences identified via P12LZIPC searches and Table
15 XIV lists viral sequences identified via P23TLZIPC search motifs. The viral sequences listed in these tables represent peptides which potentially exhibit antiviral activity, may be useful in the identification of antiviral compounds, and are
20 intended to be within the scope of the invention.

 The Examples presented in Sections 17, 18, 26 and 27 below, demonstrate that viral sequences identified via the motif searches described herein identify substantial antiviral characteristics. Specifically,
25 the Example presented in Section 17 describes peptides with anti-respiratory syncytial virus activity, the Example presented in Section 18 describes peptides with anti-parainfluenza virus activity, the Example presented in Section 26 describes peptides with anti-
30 measles virus activity and the Example presented in Section 27 describes peptides with anti-simian immunodeficiency virus activity.

 The DP107 and DP178 analogs may, further, contain any of the additional groups described for DP178,
35 above, in Section 5.1. For example, these peptides

may include any of the additional amino-terminal groups as described above for "X" groups, and may also include any of the carboxy-terminal groups as described, above, for "Z" groups.

5 Additionally, truncations of the identified DP107 and DP178 peptides are among the peptides of the invention. Further, such DP107 and DP178 analogs and DP107/DP178 analog truncations may exhibit one or more amino acid substitutions, insertion, and/or deletions. The DP178 analog amino acid substitutions, insertions
10 and deletions, are as described, above, for DP178-like peptides in Section 5.1. The DP-107 analog amino acid substitutions, insertions and deletions are also as described, above, for DP107-like peptides in Section 5.2.

15 Tables XV through XXII, below, present representative examples of such DP107/DP178 truncations. Specifically, Table XV presents Respiratory Syncytial Virus F1 region DP107 analog carboxy truncations, Table XVI presents Respiratory
20 Syncytial Virus F1 region DP107 analog amino truncations, Table XVII presents Respiratory Syncytial Virus F1 region DP178 analog carboxy truncations, Table XVIII presents Respiratory Syncytial Virus F1 region DP178 analog amino truncations, Table XIX
25 presents Human Parainfluenza Virus 3 F1 region DP178 analog carboxy truncations, Table XX presents Human Parainfluenza Virus 3 F1 region DP178 analog amino truncations, Table XXI presents Human Parainfluenza Virus 3 F1 region DP107 analog carboxy truncations and
30 Table XXII presents Human Parainfluenza Virus 3 F1 region DP107 analog amino truncations. Further, Table XXIII, below, presents DP107/DP178 analogs and analog truncations which exhibit substantial antiviral activity. These antiviral peptides are grouped
35 according to the specific virus which they inhibit,

including respiratory syncytial virus, human
parainfluenza virus 3, simian immunodeficiency virus
and measles virus.

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T,0510

TABLE V

ALLMOTI5 SEARCH RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	ALLNOTES	All Viruses (no bacteriophage)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILE NAME	PROTEIN	VIRUS								
P170K_TRVPS	POTENTIAL 170 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSG)	113-151							
P194K_TRVSV	POTENTIAL 194 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYN)	144-178	214-248	391-446	644-678	1045-1079	1135-1176	1335-1376	1618-1658
P193KD_HSV8U	55.8 KD PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	228-262							
PAANT_HDVAM	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE AMERICAN)	3-48	100-144						
PAANT_HDVDI	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE DJRO)	7-48	100-144						
PAANT_HDVT	DELTA ANTIGEN (ALPHA ANTIGEN)	HERPES DELTA VIRUS (ISOLATE ITALIAN)	3-48	100-144						
PAANT_HDVL1	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE LEBANON-1)	3-48	100-144						
PAANT_HDVM1	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE JAPANESE M-1)	3-48	100-144						
PAANT_HDVN2	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE JAPANESE M-2)	3-48	100-144						
PAANT_HDVNA	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE NAURU)	3-48	100-144						
PAANT_HDVS1	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE JAPANESE S-1)	1-49	100-144						
PAANT_HDVS2	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE JAPANESE S-2)	1-49	100-144						
PAANT_HDVNO	DELTA ANTIGEN	HERPES DELTA VIRUS (ISOLATE WOODCHUCK)	3-48	100-144						
PAT1H_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE IP-438)	71-110							
PAT1I_VACCV	94 KD A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	14-57	420-564	570-625					
PAT1I_VARY	81 KD A-TYPE INCLUSION PROTEIN	VARIOLA VIRUS	425-525	531-565	571-628					
PAT2_HSV11	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	304-345							
PAT2_HSV1F	ALPHA TRANS-INDUCING FACTOR	HERPES SIMPLEX VIRUS (TYPE 1)	102-139	104-345						
PAT2_HSV2H	ALPHA TRANS-INDUCING FACTOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	101-147	268-331						
PAT2_HSVBP	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	79-124	219-263						
PAT2_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	79-124							
PAT2_VZVD	ALPHA TRANS-INDUCING FACTOR	VARIOLA-ZOSTER VIRUS (STRAIN DUMAS)	298-361	395-429						
PAT3_VACCV	PUTATIVE A-TYPE INCLUSION PROTEIN	VACCINIA VIRUS	51-95							
PATIN_HSV23	ALPHA TRANS-INDUCING PROTEIN (VMAW65)	HERPES SIMPLEX VIRUS (TYPE 2)	178-219	324-381						
PATIN_HSV2H	ALPHA TRANS-INDUCING PROTEIN (VMAW65)	HERPES SIMPLEX VIRUS (TYPE 2)	177-222	324-381						
PATIN_HSVBP	ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1	195-236							
PATIN_HSVB	ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1	241-289							
PATIN_VZVD	ALPHA TRANS-INDUCING PROTEIN	VARIOLA-ZOSTER VIRUS (STRAIN DUMAS)	206-252							
PAT1_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-57	426-526	532-566	572-629	801-989	1106-1150		
PBDL2_EBV	PROTEIN BDL2	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-131							
PBL1_EBV	TRANSCRIPTION ACTIVATOR BRLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-187							
PCOA1_POVBA	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVBK	COAT PROTEIN VP1	POLYOMAVIRUS BK	107-141							
PCOA1_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMAVIRUS	159-195							
PCOA1_SY40	COAT PROTEIN VP2	SIMIAN VIRUS 40	109-143							
PCOA2_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	141-213							
PCOA2_POVBA	COAT PROTEIN VP2	POLYOMAVIRUS BK (STRAIN A5)	14-64	317-351						
PCOA2_POVBK	COAT PROTEIN VP2	POLYOMAVIRUS BK	14-64	317-351						
PCOA2_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	35-76	153-216						
PCOA2_POVHA	COAT PROTEIN VP2	HAMSTER POLYOMAVIRUS	7-48	174-208						
PCOA2_POVIC	COAT PROTEIN VP2	POLYOMAVIRUS JC	14-64	233-267						
PCOA2_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMAVIRUS	14-78	156-206						
PCOA2_POVNA3	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN 3)	5-72	137-185						
PCOA2_POVNA3	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVNA3	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	5-72	137-185						
PCOA2_POVNA3	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	15-56	177-211						
PCOA2_POVNA3	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS	14-62	228-262	318-352					
PCOA2_POVNA3	COAT PROTEIN	SIMIAN VIRUS 40	180-214							
PCOA2_POVNA3	COAT PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	154-188							
PCOA2_POVNA3	COAT PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	243-284							
PCOA2_POVNA3	COAT PROTEIN VP1	AEDS DENSONUCLEOSIS VIRUS	36-70	100-134						
PCOA2_POVNA3	COAT PROTEIN	ARTICHOKE MOTTLED CRINKLE VIRUS	89-123							
PCOA2_POVNA3	COAT PROTEIN	BEAN LEAFROLL VIRUS								

PCGENE	ALL MOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PCOAT_BMY	COAT PROTEIN	BROME MOSAIC VIRUS	36-71							
PCOAT_BYDV1	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	161-197							
PCOAT_BYDV2	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	161-197							
PCOAT_BYDV3	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_BYDV4	COAT PROTEIN	BARLEY YELLOW DWARF VIRUS	164-198							
PCOAT_CAMVC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN)	56-90	186-223						
PCOAT_CAMVD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CAMVE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	186-223						
PCOAT_CAMVN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	56-90	185-222						
PCOAT_CAMVS	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS	53-91	187-224						
PCOAT_CARMV	COAT PROTEIN	CARNATION MOTTLE VIRUS	13-51							
PCOAT_CCMV	COAT PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	141-178							
PCOAT_CERV	PROBABLE COAT PROTEIN	CARNATION ETCHED RING VIRUS	192-226							
PCOAT_CHVP1	MAJOR CAPSID PROTEIN	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	393-435							
PCOAT_CLVK	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CLVN	COAT PROTEIN	CASSAVA LATENT VIRUS	197-231							
PCOAT_CNVC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNV1	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNVP6	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNVC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNVL	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CNVC	COAT PROTEIN	CUCUMBER MOSAIC VIRUS	153-187							
PCOAT_CSMV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-365							
PCOAT_CTV36	COAT PROTEIN	CHLORELLA STRIATE MOSAIC VIRUS	184-218							
PCOAT_CTV36	COAT PROTEIN	CITRUS TRISTEZA VIRUS	79-120							
PCOAT_CVMV	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	162-204							
PCOAT_CPMV	COAT PROTEIN	EGGPLANT MOSAIC VIRUS	40-74							
PCOAT_CVC8	COAT PROTEIN	FELINE CALICIVIRUS	432-466	566-600						
PCOAT_FCVF4	COAT PROTEIN	FELINE CALICIVIRUS	502-550	566-600						
PCOAT_FCVF9	COAT PROTEIN	FELINE CALICIVIRUS	519-553	569-603						
PCOAT_FMYD	PROBABLE COAT PROTEIN	FIOWORT MOSAIC VIRUS	144-199	206-247	449-483					
PCOAT_FMYD	PROBABLE COAT PROTEIN	FOXTAIL MOSAIC VIRUS	168-220							
PCOAT_IRV1	CAPSID PROTEIN	TIPULA IRIDESCENT VIRUS	90-124							
PCOAT_IRV2	CAPSID PROTEIN	SIMULIUM IRIDESCENT VIRUS	90-124							
PCOAT_IRV6	CAPSID PROTEIN	CHILO IRIDESCENT VIRUS	51-85							
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	32-70	255-289						
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	7-76	84-121						
PCOAT_MSVK	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVN	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_MSVS	COAT PROTEIN	MAIZE STREAK VIRUS	187-221							
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	105-139							
PCOAT_PAVB0	COAT PROTEIN VP2	BOVINE PARVOVIRUS	380-414	444-480						
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS	497-531							
PCOAT_PEBV	COAT PROTEIN	PEA EARLY BROWNING VIRUS	73-114							
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS	36-81							
PCOAT_PPMVS	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS	104-138							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS	38-72	251-292						
PCOAT_PYMV	COAT PROTEIN	POTATO YELLOW MOSAIC VIRUS	190-224							
PCOAT_RBDV	COAT PROTEIN	RASPBERRY BUSHY DWARF VIRUS	10-44	140-199						
PCOAT_RGNMV	COAT PROTEIN	RED CLOVER NECROTIC MOSAIC VIRUS	272-306							
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	34-68	83-120	259-309					
PCOAT_SLCV	COAT PROTEIN	SQUASH LEAF CURL VIRUS	190-224							

PGENE	ALL MOTIS	ALL Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PCOAT_SMWLM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	66-100							
PCOAT_SCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-166							
PCOAT_STNV1	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 1	2-50							
PCOAT_STNV2	COAT PROTEIN	SATELLITE TOBACCO NECROSIS VIRUS 2	38-72							
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	7-55							
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERM VIRUS	14-48							
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	1-37	41-77						
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS	44-78	100-134						
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	12-46							
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	186-220							
PCOAT_TGMV6	COAT PROTEIN	TOMATO MILD GREEN MOSAIC VIRUS	103-137							
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMYCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMYDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	76-138							
PCOAT_TMYER	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMYHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMYO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMYOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TMYTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS	103-137							
PCOAT_TRVCA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	71-109							
PCOAT_TRVTC	COAT PROTEIN	TOBACCO MOSAIC VIRUS	69-103							
PCOAT_TYDVA	COAT PROTEIN	TOBACCO MOSAIC VIRUS	2-36							
PCOAT_TYV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_TYVVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-75							
PCOAT_WCMV	COAT PROTEIN	WHITE CLOVER MOSAIC VIRUS	163-197							
PCORA_HPBGS	CORE ANTIGEN	GROUND SQUIRREL HEPATITIS VIRUS	94-135							
PCORA_HPBVS	CORE ANTIGEN	HEPATITIS B VIRUS	111-149							
PCORA_WHV1	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 1	62-106							
PCORA_WHV8	CORE ANTIGEN	WOODCHUCK HEPATITIS VIRUS 8	62-106							
PD350_ASFB7	PROTEIN D350R	AFRICAN SWINE FEVER VIRUS	198-232							
PDNB2_ADE01	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	291-336							
PDNB2_ADE03	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 5	291-336							
PDNB1_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS	215-252	718-752	974-1093	1027-1068				
PDNB1_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS	338-372	1013-1070						
PDNB1_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNB1_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNB1_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS	557-595	599-640	769-803	1079-1140				
PDNB1_HSV2	MAJOR DNA-BINDING PROTEIN	BOVINE HERPES VIRUS TYPE 2	552-591	599-633	1048-1131					
PDNB1_HSV2E1	MAJOR DNA-BINDING PROTEIN	EQUINE HERPES VIRUS TYPE 1	273-314							
PDNB1_HSV2E	MAJOR DNA-BINDING PROTEIN	EQUINE HERPES VIRUS TYPE 1	617-658	1107-1148						
PDNB1_HSV2A	MAJOR DNA-BINDING PROTEIN	HERPES VIRUS SAIMIRI	222-259	310-367	506-557	873-907				
PDNB1_MCMV3	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS	584-618	987-1125						
PDNB1_SCMYC	MAJOR DNA-BINDING PROTEIN	SIRIAN CYTOMEGALOVIRUS	525-562							
PDNB1_VZVO	MAJOR DNA-BINDING PROTEIN	VARICELLA-ZOSTER VIRUS	613-650	1043-1077						
PDNL1_ASFM2	DNA LIGASE	AFRICAN SWINE FEVER VIRUS	72-106							
PDNL1_VACCC	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNL1_VACCV	DNA LIGASE	VACCINIA VIRUS	395-436							
PDNL1_VARY	DNA LIGASE	VARICELLA VIRUS	395-436							
PDPOL_ADE02	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	667-743							
PDPOL_ADE03	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	667-743							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	733-809							

PCGENE	ALLNOTIS	ALL VITRES (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILENAME	PROTEIN	VIRUS	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	665-741							
PDPOL_CHEV2	DNA POLYMERASE	CHORISTONELRA BIEINIS ENTOMOPHOXVIRUS	23-64	202-240						
PDPOL_CHEV3	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	247-284							
PDPOL_CHV71	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	247-284							
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	80-114	371-412					
PDPOL_HOMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-787	1033-1074						
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS	5-39							
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39							
PDPOL_HPBOW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S3)	5-39	297-338						
PDPOL_HPBOS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	291-325							
PDPOL_HPBRE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39	224-265	557-595					
PDPOL_HPBVY	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	201-235							
PDPOL_HSV11	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	511-559							
PDPOL_HSV1A	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	511-559							
PDPOL_HSV1K	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	511-559							
PDPOL_HSV1S	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	511-559							
PDPOL_HSV21	DNA POLYMERASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	512-560							
PDPOL_HSV2B	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	494-528							
PDPOL_HSV71	DNA POLYMERASE	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS)	31-67	328-366	401-435	706-749	808-838			
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAHA CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	595-646							
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	627-683	770-818	828-862					
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	627-683	770-818	828-862					
PDPOL_VARY	DNA POLYMERASE	VARIOLA VIRUS	626-682	769-817	827-861					
PDPOL_VZVD	DNA POLYMERASE	VARIOLA VIRUS	473-533							
PDPOL_WHV1	DNA POLYMERASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	285-326							
PDPOL_WHV39	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	290-331							
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	290-331							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	289-330							
PDPOL_WHV82	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	290-331							
PDPOL_WHV83	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	201-235							
PDPOL_WHV84	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE AYW)	135-169							
PDPOL_WHV85	DNA POLYMERASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	179-223							
PDPOL_WHV86	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	107-141							
PDPOL_WHV87	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	102-166							
PDPOL_WHV88	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 41	103-137							
PDPOL_WHV89	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	103-137							
PDPOL_WHV90	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	103-137							
PDPOL_WHV91	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	96-131							
PDPOL_WHV92	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 40	100-134							
PDPOL_WHV93	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 41	100-134							
PDPOL_WHV94	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 1	119-173							
PDPOL_WHV95	DNA POLYMERASE	MOUSE ADENOVIRUS TYPE 2	2-39							
PDPOL_WHV96	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 3	8-49							
PDPOL_WHV97	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	2-39							
PDPOL_WHV98	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	7-48							
PDPOL_WHV99	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 35	70-107							
PDPOL_WHV100	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 35	125-169							
PDPOL_WHV101	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	10-44							
PDPOL_WHV102	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	10-44							
PDPOL_WHV103	DNA POLYMERASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	123-157							
PDPOL_WHV104	DNA POLYMERASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	487-521							
PDPOL_WHV105	DNA POLYMERASE	VARICELLA VIRUS	23-71	307-341						

PCGENE	ALLNOTES	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS								
PENV1_FRSV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-375							
PENV2_FRSV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	341-378							
PENV3_FRSV	ENV POLYPROTEIN	A VIAN RETICULOENDOTHELIOSIS VIRUS	420-472							
PENV4_FRSV	ENV POLYPROTEIN	A VIAN SPLEEN NECROSIS VIRUS	426-478							
PENV5_FRSV	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	390-456							
PENV6_FRSV	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	10-44	88-122	221-255	510-610	635-691			
PENV7_FRSV	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	10-44	88-122	159-193	250-284	559-639	664-724		
PENV8_FRSV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLX)	104-379							
PENV9_FRSV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-379							
PENV10_FRSV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-379							
PENV11_FRSV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	304-379							
PENV12_FRSV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-379							
PENV13_FRSV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-379							
PENV14_FRSV	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	157-196	615-720	751-785	847-895				
PENV15_FRSV	ENV POLYPROTEIN PRECURSOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	154-193	611-718	749-783	845-893				
PENV16_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P1-1)	39-76	416-525	559-593	668-716				
PENV17_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P1-2)	39-76	416-525	559-593	658-692				
PENV18_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P1-3)	39-76	416-525	559-593	658-716				
PENV19_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P1-5)	39-76	416-525	559-593	658-716				
PENV20_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	39-76	416-525	559-593	658-716				
PENV21_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSU5)	39-76	416-525	559-593	658-716				
PENV22_FRSV	ENV POLYPROTEIN PRECURSOR	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYONING)	39-76	416-525	559-593	658-716				
PENV23_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	501-555	567-604						
PENV24_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMIA)	610-690	715-736						
PENV25_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	601-688	713-734						
PENV26_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TN12)	601-688	713-734						
PENV27_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (CLONE CFE-6)	497-549	561-595						
PENV28_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AG14SCOW-1)	478-530	542-576						
PENV29_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	498-550	562-596						
PENV30_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	475-527	536-573						
PENV31_FRSV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	1-41	154-205	321-355	563-693	866-903			
PENV32_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	498-550	562-596						
PENV33_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	478-530	542-576						
PENV34_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	481-524	545-579						
PENV35_FRSV	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	498-552							
PENV36_FRSV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	523-575	587-621						
PENV37_FRSV	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	321-383							
PENV38_FRSV	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	316-383							
PENV39_FRSV	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE NT-2)	321-383							
PENV40_FRSV	ENV POLYPROTEIN PRECURSOR	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	317-377							
PENV41_FRSV	ENV POLYPROTEIN PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2SF2 ISOLATE)	497-593	612-711	766-845					
PENV42_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	505-594	610-712	767-843					
PENV43_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH8 ISOLATE)	500-589	603-707	762-838					
PENV44_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRUN ISOLATE)	331-365	501-590	609-708	763-831				
PENV45_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	510-599	615-717	772-841					
PENV46_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	342-376	510-606	626-724	779-855				
PENV47_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	255-296	502-591	607-709	768-829				
PENV48_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	505-594	610-712	767-836					
PENV49_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB3 ISOLATE)	505-594	610-712	767-843					
PENV50_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HJ ISOLATE)	343-377	517-605	622-723	778-843				
PENV51_FRSV	ENV POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRC5F ISOLATE)	329-363	497-586	603-704	759-835				

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS									
PENY_HV1KB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP12)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	
PENY_HV1MA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NAL ISOLATE)	88-122	318-372	511-545	555-599	618-677	681-718	772-848		
PENY_HV1MF	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	259-300	507-596	617-714	770-825					
PENY_HV1MN	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	503-592	622-710	765-841						
PENY_HV1NS	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	316-370	506-595	617-713	774-841					
PENY_HV1ND	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL)	376-360								
PENY_HV1OY	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	495-584	601-702	757-825					
PENY_HV1PV	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	316-370	497-593	610-711	766-842					
PENY_HV1RH	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	505-594	610-712	767-843						
PENY_HV1SI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RFHAT ISOLATE)	344-378	507-603	619-721	776-852					
PENY_HV1S3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	496-585	602-703	758-830						
PENY_HV1SC	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	332-366	494-590	607-708	763-837					
PENY_HV1W1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	331-365	498-594	611-712	767-834					
PENY_HV1W2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ1 ISOLATE)	331-365	498-594	611-712	767-836					
PENY_HV1Z1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMJ2 ISOLATE)	332-361	489-584	602-703	758-827					
PENY_HV1Z2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLA	425-296	502-591	610-709	764-831					
PENY_HV1Z3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	251-292								
PENY_HV1Z6	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	256-297	504-593	609-711	766-840					
PENY_HV1Z8	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	266-307	512-601	617-675	682-719	774-831				
PENY_HV1ZB	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE H2321 ISOLA	452-294	612-671	675-712	777-839					
PENY_HV2B2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	447-481	510-595	617-680						
PENY_HV2CA	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAN2)	512-597	619-709							
PENY_HV2D1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	501-586	608-698							
PENY_HV2G1	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	439-473	502-587	609-699						
PENY_HV2N2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	488-587	609-699							
PENY_HV2Z0	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	511-596	618-708							
PENY_HV2S2	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST724.1CH	442-476	505-590	612-702						
PENY_HV2S3	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SRLISY)	526-588	614-700							
PENY_HV2ST	ENVELOPE POLYPROTEIN GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	505-590	612-702						
PENY_PNAE	ENV POLYPROTEIN PRECURSOR	MOLISE INTRACISTERNAL A-PARTICLE	367-422	465-527							
PENY_JSRV	ENV POLYPROTEIN PRECURSOR	SHEEP PULMONARY ADENOMATOSIS VIRUS	403-455	571-605							
PENY_MGFF	ENV POLYPROTEIN PRECURSOR	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-525	537-571							
PENY_MGFF3	ENV POLYPROTEIN PRECURSOR (COAT POLYPROTEIN)	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLA	474-526	538-572							
PENY_MLVAV	ENV POLYPROTEIN PRECURSOR	AKV MURINE LEUKEMIA VIRUS	503-555	567-601							
PENY_MLVCB	ENV POLYPROTEIN PRECURSOR	CAS-BR-E MURINE LEUKEMIA VIRUS	498-550	562-596							
PENY_MLVF3	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	520-564	576-610							
PENY_MLVFF	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	520-564	576-610							
PENY_MLVFP	ENV POLYPROTEIN PRECURSOR	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	520-564	576-610							
PENY_MLVHO	ENV POLYPROTEIN PRECURSOR	HONGKONG MURINE LEUKEMIA VIRUS	504-551	563-597							
PENY_MLVK1	ENV POLYPROTEIN PRECURSOR	KIRSTEN MURINE LEUKEMIA VIRUS	40-92	104-138							
PENY_MLVMO	ENV POLYPROTEIN PRECURSOR	MOLONEY MURINE LEUKEMIA VIRUS	502-554	566-600							
PENY_MLVRO	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS	497-549	561-595							
PENY_MLVXK	ENV POLYPROTEIN PRECURSOR	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-549	561-595							
PENY_MMIVB	ENV POLYPROTEIN PRECURSOR	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	477-539	536-612							
PENY_MMIVYO	ENV POLYPROTEIN PRECURSOR	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	477-539	536-612							
PENY_MPMV	ENV POLYPROTEIN PRECURSOR	SIMIAN MASON-PFIZER VIRUS	408-474								
PENY_MSYFB	ENV POLYPROTEIN PRECURSOR	FBI MURINE OSTEOSARCOMA VIRUS	43-95	107-141							
PENY_OAVV3	ENV POLYPROTEIN PRECURSOR	OYVINE LENTIVIRUS (STRAIN SA-ONVY)	22-64	185-223	664-746	780-816					
PENY_RMCVY	ENV POLYPROTEIN PRECURSOR	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	484-528	540-574							
PENY_ASFFV	ENV POLYPROTEIN PRECURSOR	RAUSCHER SPLEEN FOCUS-FORMING VIRUS	342-376								
PENY_SFV1	ENV POLYPROTEIN PRECURSOR	SIMIAN FOAMY VIRUS (TYPE 1)	1-41	101-140	154-205	321-355	563-651	658-693	866-904		
PENY_SFV1L	ENV POLYPROTEIN PRECURSOR	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	5-46	158-209	319-357	560-706	863-901				
PENY_SIVAI	ENVELOPE POLYPROTEIN GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGN155 ISOLATE)	269-310	551-623	643-693						

PCGENE	ALLMOTIS	All Viruses (no bacteriophage)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	
PHENIA_IAPAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAPAN/005/57)	375-467	502-547							
PHENIA_IAPJE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	376-478	506-541							
PHENIA_IAPEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ENINGRAD/54/1)	376-478	506-548							
PHENIA_IAPAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/24/82)	377-453								
PHENIA_IAPAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/26/82)	382-458								
PHENIA_IAPAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/68/74/78)	380-456								
PHENIA_IAPAE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MIEMPHIS/1/71)	380-456								
PHENIA_IAPAE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MIEMPHIS/102/72)	380-456								
PHENIA_IAPAE6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MIEMPHIS/6/86)	364-440								
PHENIA_IAPIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/ININK/SWEDEN/84)	108-142	375-475							
PHENIA_IAPIN6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/INT/60/68)	380-456								
PHENIA_IAPIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WIALE/ENIA/NE/28/84)	378-477	496-534							
PHENIA_IAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/34)	376-478	506-548							
PHENIA_IAPUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDDY TURNSTONE/NEW JERSEY/378-454)	378-454								
PHENIA_IASE2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/13/82)	378-454								
PHENIA_IASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/7/2)	379-474	506-552							
PHENIA_IASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/515/85)	112-146	377-469							
PHENIA_IATKI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/13/88/83)	379-471	506-551							
PHENIA_IATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/INNES/OT/83/780)	378-454								
PHENIA_IATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/712/66)	392-470	504-548							
PHENIA_IATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/611/86/8)	378-454	493-540							
PHENIA_IATKR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	30-64	374-474							
PHENIA_IATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	373-472	487-539							
PHENIA_IATRA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TERRA/NEW AUSTRALIA/70C/75)	21-55								
PHENIA_IAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/UDORN/30/77)	387-456								
PHENIA_IAUSS	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/US/SS/90/77)	376-478	506-548							
PHENIA_IAYIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	381-457								
PHENIA_IAYIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VILSON-SMITH/33)	375-477	505-547							
PHENIA_IAYCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHINE/COLORADO/1/77)	380-456								
PHENIA_IAYH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHINE/HONG KONG/81/78)	364-440								
PHENIA_IAYH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHINE/HONG KONG/12/82)	364-440								
PHENIA_IAYJH	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHINE/INDIANA/172/88)	379-478	506-548							
PHENIA_IAYJN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHINE/NEW JERSEY/11/76)	379-478	506-547							
PHENIA_IAYJN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHINE/UKEL/1/84)	380-456								
PHENIA_IAYJZ	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	388-473								
PHENIA_INBIB	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/RONN/4)	378-463								
PHENIA_INBIB	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/22/82)	386-471								
PHENIA_INBHK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/87/3)	381-463								
PHENIA_INBLE	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	387-472								
PHENIA_INBMD	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	377-462								
PHENIA_INBME	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MIEMPHIS/6/86)	381-468								
PHENIA_INBNI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	386-471								
PHENIA_INBUS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/22/79)	386-471								
PHENIA_INBVI	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/US/83/100/83)	379-464								
PHENIA_INBVK	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/7/85)	381-466								
PHENIA_INBVC	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	388-473								
PHENIA_INBGA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/78)	483-571								
PHENIA_INBEN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/89/83)	471-559								
PHENIA_INBGL	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/11/67/54)	471-559								
PHENIA_INBHY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	470-558								
PHENIA_INBCH	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/JOHANNESBURG/1/66)	484-572								
PHENIA_INBCKY	HEMAGGLUTININ	INFLUENZA C VIRUS (STRAIN C/KYOTO/4/82)	470-558								

PCGENE	ALLMOTIS	ALL VIRUSES (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILE NAME	PROTEIN	VIRUS								
PHX9_ADE12	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 12	88-137							AREA.9
PHX9_ADE41	HEXON-ASSOCIATED PROTEIN	HUMAN ADENOVIRUS TYPE 41	87-126							
PHX9_ADEC1	HEXON-ASSOCIATED PROTEIN	CANINE ADENOVIRUS TYPE 2	53-103							
PHX9_ADE1T	HEXON-ASSOCIATED PROTEIN	TUPAIA ADENOVIRUS	61-109							
PHX9_ADE02	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 2	341-386	433-467	583-624					
PHX9_ADE03	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 5	330-379							
PHX9_ADE40	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 40	303-352	408-449	553-587					
PHX9_ADE41	HEXON PROTEIN	HUMAN ADENOVIRUS TYPE 41	306-355	555-589						
PHX9_ADEB3	HEXON PROTEIN	BOVINE ADENOVIRUS TYPE 3	301-346	385-419	544-578	705-739				
PHRG_COWPX	HOST RANGE PROTEIN	COWPOX VIRUS	320-395	455-489						
P1226_ASF87	LATE PROTEIN 1226R	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	110-151							
PIBMP_CAMYA	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D4)	344	378-419						
PIBMP_CAMYB	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BAR1 1)	379-420							
PIBMP_CAMYC	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CN41841)	3-37	378-419						
PIBMP_CAMYD	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DHI)	3-44	378-419						
PIBMP_CAMVE	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DDC)	3-37	378-419						
PIBMP_CAMV1	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN S-JAPAN)	3-37	378-419						
PIBMP_CAMVN	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	3-37	378-419						
PIBMP_CAMVP	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	3-37	378-419						
PIBMP_CAMVS	INCLUSION BODY MATRIX PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	3-37	378-419						
PIBMP_CERV	INCLUSION BODY MATRIX PROTEIN	CARNATION ETCHED RING VIRUS	3-37							
PIBMP_FMYD	INCLUSION BODY MATRIX PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	1-51	372-406						
PIBMP_SOCAY	INCLUSION BODY MATRIX PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1-48	132-179						
PIBMP_HCMVA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	53-98	290-324	498-532					
PIBMP_HSV11	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	331-365							
PIBMP_HSV1A	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	331-365							
PIBMP_HSV1F	PROCESSING AND TRANSPORT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	324-362							
PIBMP_HSVB2	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	466-500							
PIBMP_HSVSA	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS TYPE 1 (ISOLATE HV523A)	341-375							
PIBMP_HSVB1	PROBABLE PROCESSING AND TRANSPORT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	58-99	361-395						
PIBMP_HSVB3	PROBABLE PROCESSING AND TRANSPORT PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	60-112	290-340	647-691					
PIBMP_HSVB4	PROBABLE PROCESSING AND TRANSPORT PROTEIN	PUERDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE)	299-333	303-337						
PIBMP_HSVB5	PROBABLE PROCESSING AND TRANSPORT PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN JURA)	190-224							
PIBMP_HSVB6	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN K22)	190-224							
PIBMP_HSVB7	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP0	BOVINE HERPESVIRUS TYPE 1 (STRAIN K22)	1022-1056							
PIBMP_HSVB8	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	920-954							
PIBMP_HSVB9	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	207-241							
PIBMP_HSVB10	TRANS-ACTING TRANSCRIPTIONAL PROTEIN ICP4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	241-275							
PIBMP_HSVB11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	282-316							
PIBMP_HSVB12	TRANSCRIPTIONAL REGULATOR IE63	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4F)	195-229	258-306						
PIBMP_HSVB13	TRANSCRIPTIONAL REGULATOR IE63	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	87-121							
PIBMP_HSVB14	TRANSCRIPTIONAL REGULATOR IE63	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	99-133							
PIBMP_HSVB15	TRANSCRIPTIONAL REGULATOR IE63	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4F)	48-85							
PIBMP_HSVB16	TRANSCRIPTIONAL REGULATOR IE63	HERPESVIRUS SAIMIRI (STRAIN 11)	13-47							
PIBMP_HSVB17	TRANSCRIPTIONAL REGULATOR IE63	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-162							
PIBMP_HSVB18	TRANSCRIPTIONAL REGULATOR IE63	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	280-314							
PIBMP_HSVB19	TRANSCRIPTIONAL REGULATOR IE63	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 2)	217-251							
PIBMP_HSVB20	TRANSCRIPTIONAL REGULATOR IE63	ABELSON MURINE LEUKEMIA VIRUS	172-227	263-304						
PIBMP_HSVB21	TRANSCRIPTIONAL REGULATOR IE63	AKT8 MURINE LEUKEMIA VIRUS	23-64	104-178						
PIBMP_HSVB22	TRANSCRIPTIONAL REGULATOR IE63	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	218-252							
PIBMP_HSVB23	TRANSCRIPTIONAL REGULATOR IE63	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	313-362	812-849						
PIBMP_HSVB24	TRANSCRIPTIONAL REGULATOR IE63	AVIAN SARCOMA VIRUS (STRAIN PCII)	65-99							

PCGENE	ALLIOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PKPFS_FUJIS	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	FUJINAMI SARCOMA VIRUS	65-99	152-231	348-398					
PKITH_AMEPV	THYMIDINE KINASE	AMSACTA MOOREI ENTOMOPOXVIRUS	47-81							
PKITH_CAPVK	THYMIDINE KINASE	CAPPOXVIRUS (STRAIN KS-1)	38-82	431-472						
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	228-262							
PKITH_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	90-124							
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	90-124							
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEN)	90-124							
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	90-124							
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	90-124							
PKITH_HSV2J	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN J33)	91-125							
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 3 (STRAIN WC11)	616-665							
PKITH_HSVB4	THYMIDINE KINASE	EQUINE HERPES VIRUS TYPE 4 (STRAIN 1942)	19-53	178-219						
PKITH_HSVB6	THYMIDINE KINASE	EQUINE HERPES VIRUS TYPE 1 (STRAIN AB4P)	19-53	178-230						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPES VIRUS (FELID HERPES VIRUS 1)	180-214							
PKITH_HSVNR	THYMIDINE KINASE	MARMOSSET HERPES VIRUS	52-86							
PKITH_HSVSA	THYMIDINE KINASE	HERPES VIRUS SAIMIRI (STRAIN 11)	337-389							
PKITH_PRVN3	THYMIDINE KINASE	PSEUDORABIES VIRUS (STRAIN NIA-3)	161-202							
PKMIL_AVMH	MIL SERINE/THREONINE-PROTEIN KINASE TRANSF	AVIAN RETROVIRUS NH2	69-103							
PKR15_HSV11	GENE 15 PROTEIN KINASE	ICTALURID HERPES VIRUS 1	190-224							
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	ICTALURID HERPES VIRUS 1	57-91	281-315						
PKR74_HSV11	GENE 74 PROTEIN KINASE	MURINE SARCOMA VIRUS 3611	487-528	597-631						
PKRAF_MSV16	RAF SERINE/THREONINE-PROTEIN KINASE TRANSF	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-45							
PKRB1_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	127-168							
PKRB1_VACCV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS	123-171							
PKRB1_VARV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-181							
PKRB2_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-181							
PKRB2_VACCV	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	169-203							
PKRF1_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-IVP)	136-170							
PKRF1_VACCP	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	169-203							
PKRF1_VARV	POSSIBLE PROTEIN KINASE F10	AVIAN SARCOMA VIRUS (STRAIN UR2)	111-145							
PKROS_AVISU	ROS TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN RETROVIRUS RPL30	15-66							
PKRYK_AYB3	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	VACCINIA VIRUS (STRAIN WR)	135-169							
PKTHY_VACCV	THYMIDYLATE KINASE	AVIAN SARCOMA VIRUS (STRAIN Y73)	174-233							
PKYES_AVISY	TYROSINE-PROTEIN KINASE TRANSFORMING PROT	HUMAN ADENOVIRUS TYPE 2	441-475							
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	223-264							
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-232	408-442						
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	199-233							
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	238-284							
PL52_ADE05	LATE L1 52 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	238-284							
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	144-179							
PMCEL_SFVKA	MRNA CAPPING ENZYME	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-152							
PMCEL_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-41	623-637						
PMCEL_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	1-41	623-637						
PMCEL_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	1-39	623-637						
PMCES_VACCC	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN COPENHAGEN)	72-137	245-286						
PMCES_VACCV	MRNA CAPPING ENZYME	VACCINIA VIRUS (STRAIN WR)	72-137	245-286						
PMCES_VARV	MRNA CAPPING ENZYME	VARIOLA VIRUS	72-137	245-286						
PMCE_ASFB7	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	116-157	279-313	738-772					
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	51-90							
PMOVP_PPMVS	MOVEMENT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	26-66							
PMOVP_TMGMV	MOVEMENT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	20-66							

PCGENE	ALLNOTES	All Viruses (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILENAME	PROTEIN	VIRUS	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
PNCAP_MEAS	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	188-226	361-411						
PNCAP_MOPEI	NUCLEOCAPSID PROTEIN	MOPEIA VIRUS	65-106	471-503						
PNCAP_MUMPI	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	214-235	500-534						
PNCAP_MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-235							
PNCAP_PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	1-35	40-74	337-392					
PNCAP_P11HC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	212-272	441-510						
PNCAP_P11HW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	212-272	441-510						
PNCAP_P11HT	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIBA)	214-266	344-378						
PNCAP_P11B	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	200-403	446-490						
PNCAP_P11H4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4 VIRUS (STRAIN TOSHIIBA)	87-135	208-266	344-403	440-491				
PNCAP_P11H8	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	58-94	191-267						
PNCAP_P11H9	NUCLEOCAPSID PROTEIN	PICHINDE ARENAVIRUS	65-112							
PNCAP_P11H10	NUCLEOCAPSID PROTEIN	PIRY VIRUS	71-116	325-359						
PNCAP_P11H11	NUCLEOCAPSID PROTEIN	PUNJALA VIRUS (STRAIN HALLNAS BI)	1-35	40-75	337-392					
PNCAP_P11H12	NUCLEOCAPSID PROTEIN	PUNJALA VIRUS (STRAIN SOTKANO)	1-35	40-75	337-392					
PNCAP_P11H13	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF NIICE	93-141	248-303	344-388					
PNCAP_P11H14	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AYOI)	133-167							
PNCAP_P11H15	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN 2 / HOST MUTANTS)	212-272	345-404						
PNCAP_P11H16	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN ENDERS)	212-272	345-408						
PNCAP_P11H17	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN SR-11)	1-35	40-74	331-381					
PNCAP_P11H18	NUCLEOCAPSID PROTEIN	SIRIAN VIRUS 41	215-267	372-406	418-466					
PNCAP_P11H19	NUCLEOCAPSID PROTEIN	SONCRUS YELLOW NET VIRUS	332-366							
PNCAP_P11H20	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	50-84	230-264						
PNCAP_P11H21	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	215-249							
PNCAP_P11H22	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNHI/BR)	79-120							
PNCAP_P11H23	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (HAWAIIAN ISOLATE)	79-120							
PNCAP_P11H24	NUCLEOCAPSID PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN L3)	79-120							
PNCAP_P11H25	NUCLEOCAPSID PROTEIN	UUKUNIEMI VIRUS	51-102							
PNCAP_P11H26	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	249-325							
PNCAP_P11H27	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MAKAH)	142-180	249-325						
PNCAP_P11H28	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C42-108)	42-108							
PNCAP_P11H29	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA 67-115)	67-115							
PNCAP_P11H30	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	42-115							
PNCAP_P11H31	NUCLEOCAPSID PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	7-48							
PNCAP_P11H32	NUCLEOCAPSID PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	7-41							
PNCAP_P11H33	NUCLEOCAPSID PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	112-160							
PNCAP_P11H34	NUCLEOCAPSID PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	109-150							
PNCAP_P11H35	NUCLEOCAPSID PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	108-149							
PNCAP_P11H36	NUCLEOCAPSID PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR196-140)	9-43	233-267						
PNCAP_P11H37	NUCLEOCAPSID PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236SMH4 ISOLATE)	33-74							
PNCAP_P11H38	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/02/78/81)	33-74							
PNCAP_P11H39	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/CAMERON/ANGOLIA/82)	50-91							
PNCAP_P11H40	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1370/349-383)	349-383							
PNCAP_P11H41	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1125/349-383)	349-383							
PNCAP_P11H42	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/749)	14-48							
PNCAP_P11H43	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/OWL PLAGE VIRUS/WEYBRID)	14-48	194-229						
PNCAP_P11H44	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/OWL PLAGE VIRUS/WEYBRID)	10-47	193-227						
PNCAP_P11H45	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	5-44	361-402						
PNCAP_P11H46	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN AKIEV/5979)	50-91							
PNCAP_P11H47	NUCLEOCAPSID PROTEIN	INFLUENZA A VIRUS (STRAIN AKIEV/5979)								

PGCENE	ALL MOTIS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PNRAM_TALEN	NEURAMINIDASE	50-91							
PNRAM_JAMEI	NEURAMINIDASE	50-88							
PNRAM_JARUE	NEURAMINIDASE	50-88							
PNRAM_JASH2	NEURAMINIDASE	10-44							
PNRAM_JATKR	NEURAMINIDASE	7-41							
PNRAM_JATSR	NEURAMINIDASE	49-83							
PNRAM_JAUS5	NEURAMINIDASE	50-91							
PNRAM_JAUSM	NEURAMINIDASE	49-91							
PNRAM_JAUSB	NEURAMINIDASE	5-46	348-382						
PNRAM_JAUSK	NEURAMINIDASE	5-46	349-383						
PNRAM_JAUSL	NEURAMINIDASE	5-46	349-383						
PNRAM_JAUSM	NEURAMINIDASE	5-46	349-382						
PNRAM_JAUSN	NEURAMINIDASE	5-39	349-382						
PNRAM_JAUSO	NEURAMINIDASE	5-46	348-382						
PNRAM_JAUSP	NEURAMINIDASE	5-46	349-383						
PNRAM_JAUSQ	NEURAMINIDASE	5-39	349-383						
PNRAM_JAUSR	NEURAMINIDASE	5-39	349-383						
PNRAM_JAUSV	NEURAMINIDASE	5-39	348-382						
PNRAM_JAUSW	NEURAMINIDASE	700-828							
PNRAM_JAUSX	NEURAMINIDASE	95-129	204-238						
PNRAM_JAUSY	NEURAMINIDASE	3-37							
PNRAM_JAUSZ	NEURAMINIDASE	3-37							
PNRAM_JAUS1	NEURAMINIDASE	28-69	110-144						
PNRAM_JAUS2	NEURAMINIDASE	122-169	415-449	514-555					
PNRAM_JAUS3	NEURAMINIDASE	56-90	248-289	549-599					
PNRAM_JAUS4	NEURAMINIDASE	56-90	248-289	549-599					
PNRAM_JAUS5	NEURAMINIDASE	134-193	455-505						
PNRAM_JAUS6	NEURAMINIDASE	189-223	689-735						
PNRAM_JAUS7	NEURAMINIDASE	121-180							
PNRAM_JAUS8	NEURAMINIDASE	121-180							
PNRAM_JAUS9	NEURAMINIDASE	121-180							
PNRAM_JAUS10	NEURAMINIDASE	95-154							
PNRAM_JAUS11	NEURAMINIDASE	203-249							
PNRAM_JAUS12	NEURAMINIDASE	203-249							
PNRAM_JAUS13	NEURAMINIDASE	203-249							
PNRAM_JAUS14	NEURAMINIDASE	15-56	60-105						
PNRAM_JAUS15	NEURAMINIDASE	11-98							
PNRAM_JAUS16	NEURAMINIDASE	19-77	197-249						
PNRAM_JAUS17	NEURAMINIDASE	190-240							
PNRAM_JAUS18	NEURAMINIDASE	4-42	48-89	97-131					
PNRAM_JAUS19	NEURAMINIDASE	47-82	165-199						
PNRAM_JAUS20	NEURAMINIDASE	414-448							
PNRAM_JAUS21	NEURAMINIDASE	37-71							
PNRAM_JAUS22	NEURAMINIDASE	37-71							
PNRAM_JAUS23	NEURAMINIDASE	379-363	743-777	1265-1299	2309-2352	2368-2404			
PNRAM_JAUS24	NEURAMINIDASE	379-363	671-705	1765-1799	2227-2264	2307-2350	2366-2402		
PNRAM_JAUS25	NEURAMINIDASE	120-161	165-216	377-415					
PNRAM_JAUS26	NEURAMINIDASE	170-212	480-519	636-677	1157-1196	1378-1412	1906-1943		
PNRAM_JAUS27	NEURAMINIDASE	223-270	929-977						
PNRAM_JAUS28	NEURAMINIDASE	161-206							
PNRAM_JAUS29	NEURAMINIDASE	240-281	669-732						
PNRAM_JAUS30	NEURAMINIDASE								
PNRAM_JAUS31	NEURAMINIDASE								
PNRAM_JAUS32	NEURAMINIDASE								
PNRAM_JAUS33	NEURAMINIDASE								
PNRAM_JAUS34	NEURAMINIDASE								
PNRAM_JAUS35	NEURAMINIDASE								
PNRAM_JAUS36	NEURAMINIDASE								
PNRAM_JAUS37	NEURAMINIDASE								
PNRAM_JAUS38	NEURAMINIDASE								
PNRAM_JAUS39	NEURAMINIDASE								
PNRAM_JAUS40	NEURAMINIDASE								
PNRAM_JAUS41	NEURAMINIDASE								
PNRAM_JAUS42	NEURAMINIDASE								
PNRAM_JAUS43	NEURAMINIDASE								
PNRAM_JAUS44	NEURAMINIDASE								
PNRAM_JAUS45	NEURAMINIDASE								
PNRAM_JAUS46	NEURAMINIDASE								
PNRAM_JAUS47	NEURAMINIDASE								
PNRAM_JAUS48	NEURAMINIDASE								
PNRAM_JAUS49	NEURAMINIDASE								
PNRAM_JAUS50	NEURAMINIDASE								
PNRAM_JAUS51	NEURAMINIDASE								
PNRAM_JAUS52	NEURAMINIDASE								
PNRAM_JAUS53	NEURAMINIDASE								
PNRAM_JAUS54	NEURAMINIDASE								
PNRAM_JAUS55	NEURAMINIDASE								
PNRAM_JAUS56	NEURAMINIDASE								
PNRAM_JAUS57	NEURAMINIDASE								
PNRAM_JAUS58	NEURAMINIDASE								
PNRAM_JAUS59	NEURAMINIDASE								
PNRAM_JAUS60	NEURAMINIDASE								
PNRAM_JAUS61	NEURAMINIDASE								
PNRAM_JAUS62	NEURAMINIDASE								
PNRAM_JAUS63	NEURAMINIDASE								
PNRAM_JAUS64	NEURAMINIDASE								
PNRAM_JAUS65	NEURAMINIDASE								
PNRAM_JAUS66	NEURAMINIDASE								
PNRAM_JAUS67	NEURAMINIDASE								
PNRAM_JAUS68	NEURAMINIDASE								
PNRAM_JAUS69	NEURAMINIDASE								
PNRAM_JAUS70	NEURAMINIDASE								
PNRAM_JAUS71	NEURAMINIDASE								
PNRAM_JAUS72	NEURAMINIDASE								
PNRAM_JAUS73	NEURAMINIDASE								
PNRAM_JAUS74	NEURAMINIDASE								
PNRAM_JAUS75	NEURAMINIDASE								
PNRAM_JAUS76	NEURAMINIDASE								
PNRAM_JAUS77	NEURAMINIDASE								
PNRAM_JAUS78	NEURAMINIDASE								
PNRAM_JAUS79	NEURAMINIDASE								
PNRAM_JAUS80	NEURAMINIDASE								
PNRAM_JAUS81	NEURAMINIDASE								
PNRAM_JAUS82	NEURAMINIDASE								
PNRAM_JAUS83	NEURAMINIDASE								
PNRAM_JAUS84	NEURAMINIDASE								
PNRAM_JAUS85	NEURAMINIDASE								
PNRAM_JAUS86	NEURAMINIDASE								
PNRAM_JAUS87	NEURAMINIDASE								
PNRAM_JAUS88	NEURAMINIDASE								
PNRAM_JAUS89	NEURAMINIDASE								
PNRAM_JAUS90	NEURAMINIDASE								
PNRAM_JAUS91	NEURAMINIDASE								
PNRAM_JAUS92	NEURAMINIDASE								
PNRAM_JAUS93	NEURAMINIDASE								
PNRAM_JAUS94	NEURAMINIDASE								
PNRAM_JAUS95	NEURAMINIDASE								
PNRAM_JAUS96	NEURAMINIDASE								
PNRAM_JAUS97	NEURAMINIDASE								
PNRAM_JAUS98	NEURAMINIDASE								
PNRAM_JAUS99	NEURAMINIDASE								
PNRAM_JAUS100	NEURAMINIDASE								

PCGENE	ALLMOTHS	All Viruses (no bacteriophages)									
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	
PPOL2_BAYM1	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	669-712	719-771	787-828						
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	365-406	542-602							
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN 5)	4-38								
PPOL2_TSRVS	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	158-206	334-368							
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	849-886	1008-1064	1382-1416	1459-1507	1576-1617				
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	244-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1869-1910	2226-2260	
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	245-289	446-491	629-663	1033-1074	1303-1344	1392-1443	1779-1820	2136-2170	
PPOLG_BYMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS	96-130								
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	9-43	362-596	664-698	1045-1100	1498-1546	1607-1648	1805-1839	1901-1946	
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	15-49	1040-1086	1895-1940						
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	15-49	1021-1067	1876-1921						
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	15-49	1024-1070	1879-1924						
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	15-49	642-681	1022-1068	1877-1922					
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	15-49	1024-1070	1879-1924						
PPOLG_CYYV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS	120-154								
PPOLG_DEN18	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN B36-1)	74-108								
PPOLG_DEN1A	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN A1IF 82-80)	74-108								
PPOLG_DEN1C	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN CV163677)	74-108								
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	74-108	832-873	960-994	1142-1179	1386-1420	1614-1648	2518-2554	2946-3016	
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	74-108	832-874	961-995	1143-1180					
PPOLG_DEN21	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M1)	448-492								
PPOLG_DEN22	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M2)	448-495								
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551	
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2485-2551	
PPOLG_DEN2D	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	728-777								
PPOLG_DEN2H	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TH-36)	497-546								
PPOLG_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	74-108	728-777	961-995	1146-1180	1246-1280	1418-1452	1615-1649	2517-2551	
PPOLG_DEN2N	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	213-247	398-432							
PPOLG_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR15951)	74-108	728-777	832-875	961-995	1146-1180	1246-1280	1418-1452	1615-1649	
PPOLG_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	448-497	552-595	681-715	866-900	966-1000	1205-1239			
PPOLG_DEN2U	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PUO-218)	614-663								
PPOLG_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	830-872	959-993	1385-1419	2224-2258	2480-2521	2704-2738	2940-2978	2980-3014	
PPOLG_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4	957-993	1380-1414	2514-2555	2701-2735	2941-2975	2977-3011			
PPOLG_ECI1G	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)	213-259	1079-1113							
PPOLG_EMCV	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS	1074-1115	1472-1518	1522-1570	1665-1706	1789-1823				
PPOLG_EMCVB	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETO)	145-179	1076-1117	1474-1520	1524-1572	1667-1708				
PPOLG_EMCVD	GENOME POLYPROTEIN	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGEN)	145-179	1076-1117	1474-1520	1524-1572	1667-1708				
PPOLG_ENMG3	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS (STRAIN 37A)	145-179								
PPOLG_ENMGO	GENOME POLYPROTEIN	MENGO ENCEPHALOMYOCARDITIS VIRUS	78-112								
PPOLG_FMDV1	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61)	221-255	294-328	578-612	1103-1153	1493-1528	2165-2200			
PPOLG_FMDVA	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12)	220-254	293-327	577-611	1103-1164	1493-1528	2164-2199			
PPOLG_FMDVO	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIBFS)	221-255	1103-1153	1493-1528	2164-2199					
PPOLG_FMDVS	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN CI-SANTA PAU [C-S	87-128	693-728							
PPOLG_FMDVT	GENOME POLYPROTEIN	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN CI)	221-255	283-317	577-611						
PPOLG_HCV1	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE 1)	364-398								
PPOLG_HCVA	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN ALFORT)	440-493	626-660	695-729	1033-1070	1190-1235	1307-1343	1779-1820	2136-2170	
PPOLG_HCVB	GENOME POLYPROTEIN	HOG CHOLERA VIRUS (STRAIN BRESCIA)	440-493	2466-2500	2525-2559	2667-2708	3152-3193	3406-3440			
PPOLG_HCVBK	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE BK)	440-493	626-660	695-729	1033-1070	1173-1235	1779-1820	2136-2170	2385-2436	
PPOLG_HCVD0	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC10)	357-398	2466-2500	2525-2559	2667-2708	3152-3195	3406-3440	3521-3563		
PPOLG_HCVH	GENOME POLYPROTEIN	HEPATITIS C VIRUS (ISOLATE EC10)	65-99	2228-2365							

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOLN_RHDV	NONSTRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	899-933	1942-1986	2444-2502					
PPOLN_RAVN	NONSTRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	188-234	306-347	409-437	1657-1716				
PPOLN_RRVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB592)	895-929	1928-1962	2414-2467					
PPOLN_RUBVT	NONSTRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	597-631	1081-1136						
PPOLN_SFV	NONSTRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	1506-1540	1551-1585	1730-1767	1862-1896				
PPOLN_SINDO	NONSTRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	1094-1128	2358-2392						
PPOLN_SINDV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	919-971	1491-1525	1961-1996	2444-2478				
PPOLR_EPMV	NONSTRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HRSP)	1491-1525	1959-1994	2442-2476					
PPOLR_EEVV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	899-933	1127-1161						
PPOLR_EEEV3	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	372-406	914-951						
PPOLR_EEVV8	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA33)(TEN BRQ 373-407)	373-407	915-952						
PPOLR_EEVV7	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	1216-1250							
PPOLR_IBDV5	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD)	1216-1250							
PPOLR_IBDV4	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 5270)	134-168	221-286	470-523					
PPOLR_IBDV6	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRAL)	134-168	221-286	470-523					
PPOLR_IBDV7	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CUL-1)	134-168	221-286	470-523					
PPOLR_IBDV8	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	134-168	221-286	304-340					
PPOLR_IBDV9	NONSTRUCTURAL PROTEIN VP4	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	115-149	212-267	451-504					
PPOLR_IPNVJ	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	134-168	249-283	470-523					
PPOLR_IPNVN	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	69-103	723-785						
PPOLR_ONNVG	STRUCTURAL POLYPROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN N1)	716-786							
PPOLR_RR2	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	1204-1238							
PPOLR_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN 213970)	35-69							
PPOLR_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB592)	369-403	939-973						
PPOLR_RUBVH	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973							
PPOLR_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV7)	999-1036							
PPOLR_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA27/3)	999-1036							
PPOLR_SINDV	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	999-1036							
PPOLR_SINDW	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	362-396							
PPOLR_WEEV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	362-396							
PPOL_BAEVM	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (WILD TYPE SB DERIVED FROM STRAIN AR339)	34-68							
PPOL_BLVAU	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	913-947							
PPOL_BLVJ	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	42-80	676-743	794-832	1001-1042				
PPOL_CAEVC	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	623-673							
PPOL_CAMVD	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	623-673							
PPOL_COTMV	ENZYMATIC POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	879-934							
PPOL_EIAV9	PUTATIVE POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	177-211							
PPOL_EIAVC	POL POLYPROTEIN	COMBILINA YELLOW MOTTLE VIRUS	87-121	313-367	447-498	838-876	896-930	1310-1351		
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	513-566	1022-1056						
PPOL_FENV1	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	513-566	1022-1056						
PPOL_FIVEP	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	533-600	623-659	838-899					
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	428-473	606-663						
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	428-473	606-662						
PPOL_FIVD7	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	428-472	595-662						
PPOL_FOAMV	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	403-437							
PPOL_GALV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	140-174	217-256	283-326					
PPOL_HTL1A	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	528-562	673-740						
PPOL_HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	670-711							
PPOL_HV1A2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	670-711							
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2/SF2 ISOLATE)	606-664							
PPOL_HV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	513-549							

PCGENE	ALLMOTTS	All Viruses (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILE NAME	PROTEIN	VIRUS								
PPOL_HV1BR	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRH3 ISOLATE)	513-349	618-676						
PPOL_HV1EL	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	513-349	618-676						
PPOL_HV1H2	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	500-536	626-663						
PPOL_HV1JR	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	501-537	606-664						
PPOL_HV1MA	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RCSF ISOLATE)	505-541	610-668						
PPOL_HV1NN	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MCSF ISOLATE)	476-536	601-663						
PPOL_HV1N3	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	504-540	609-667						
PPOL_HV1ND	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOL)	501-537	627-664						
PPOL_HV1OY	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	500-536	626-663						
PPOL_HV1PV	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYT ISOLATE)	501-537	606-664						
PPOL_HV1RH	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PY22 ISOLATE)	513-349	693-676						
PPOL_HV1U4	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RF/HAT ISOLATE)	500-536	603-663						
PPOL_HV1Z2	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN)	500-536	601-663						
PPOL_HV2CA	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLA	500-536	626-663						
PPOL_HV2D1	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	49-83	484-582	653-687	817-851				
PPOL_HV2D2	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	356-390	464-562	632-666					
PPOL_HV2G1	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	502-600	671-705						
PPOL_HV2N2	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	376-410	484-526	529-577	653-687				
PPOL_HV2R0	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1	464-562	633-667						
PPOL_HV2SB	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	44-78	356-390	464-529	633-667				
PPOL_HV2ST	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	357-391	465-563	634-668					
PPOL_P1HA	POL POLYPYROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	46-80	473-562	633-667					
PPOL_ISR V	PUTATIVE POL POLYPYROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	484-518	522-577	653-687					
PPOL_ML VAK	POL POLYPYROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	190-231							
PPOL_ML VAV	POL POLYPYROTEIN	AKR MURINE LEUKEMIA VIRUS	335-392							
PPOL_ML VFS	POL POLYPYROTEIN	AKV MURINE LEUKEMIA VIRUS	677-744							
PPOL_ML VFF	POL POLYPYROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	682-749							
PPOL_ML VFP	POL POLYPYROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	682-749							
PPOL_ML VMO	POL POLYPYROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	682-749							
PPOL_ML VRD	POL POLYPYROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	677-744							
PPOL_ML VRK	POL POLYPYROTEIN	RADIATION MURINE LEUKEMIA VIRUS	677-744							
PPOL_MPAV	POL POLYPYROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	62-129							
PPOL_OMVVS	POL POLYPYROTEIN	SIMIAN MASON-PFIZER VIRUS	470-504	578-613						
PPOL_RSVP	POL POLYPYROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVY)	470-505	855-910						
PPOL_RTBP	POL POLYPYROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	646-684							
PPOL_RTBPV	POLYPYROTEIN	RICE TUNGRO BACILLIFORM VIRUS	744	59-96	101-135	176-236	325-362	433-474	1005-1039	1405-1439
PPOL_SFV1	POL POLYPYROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	744	59-96	101-135	176-236	325-362	433-474	1005-1039	1405-1439
PPOL_SFV1L	POL POLYPYROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	340-383	427-464	494-535					
PPOL_SIV1	POL POLYPYROTEIN	SIMIAN FOAMY VIRUS (TYPE 2 / STRAIN LK3)	124-165	429-467	496-530					
PPOL_SIV2	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM153 ISOLATE)	351-385	637-678	737-771	938-979				
PPOL_SIVAG	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-86							
PPOL_SIVAI	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	477-516	642-683	742-783					
PPOL_SIVAT	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR1	175-209	476-515	641-700	942-983	1020-1054			
PPOL_SIVCZ	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-698	737-798						
PPOL_SIVGB	POL POLYPYROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ))	527-561	626-688						
PPOL_SIVM1	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GBI)	9-57	446-483	629-673	793-827	912-946			
PPOL_SIVMK	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	485-519	654-688						
PPOL_SIVS4	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	485-519	654-688						
PPOL_SIVSP	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)	488-482	617-651						
PPOL_SIVSNV	POL POLYPYROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PB/IBC13 ISOLATE)	451-485	620-654						
PPOL_SIVSV	POL POLYPYROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	247-295	372-416						
PPOL_SIVV1	ENZYMATIC POLYPYROTEIN									

PCGENE	ALLMOTIS	All Viruses (no bacteriophages)										AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS										AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PPOL_VILV	POL POLYPYRROLINE	SIMIAN RETROVIRUS SRV-1										470-504	578-613						
PPOL_VILV1	POL POLYPYRROLINE	VIRUS LENTIVIRUS (STRAIN 1514)										489-524	874-929						
PPOL_VILV2	POL POLYPYRROLINE	VIRUS LENTIVIRUS (STRAIN 1514 / CLONE LVI-1K51)										489-524	874-929						
PPR15_HCMVA	POL POLYPYRROLINE	VIRUS LENTIVIRUS (STRAIN 1514 / CLONE LVI-1K52)										489-524	874-929						
PPR17_MMTVB	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)										116-150	187-221						
PPR17_MMTVC	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)										152-200							
PPR17_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN CHH)										20-79							
PPR17_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)										61-95	142-201						
PPYHD_CPVBM	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)										145-204	270-311						
PPYHD_NPVAC	POLYHEDRIN PRECURSOR	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)										141-200	266-307						
PPYHD_NPVAS	POLYHEDRIN	BOMBAY MORI CYTOLASMIC POLYHEDROSIS VIRUS										13-85							
PPYHD_NPVBM	POLYHEDRIN	AUTOGRAFA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS										13-47							
PPYHD_NPVBS	POLYHEDRIN	BOMBAY MORI NUCLEAR POLYHEDROSIS VIRUS										14-48							
PPYHD_NPVLD	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDROSIS VIRUS										12-54							
PPYHD_NPVMB	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS										14-48							
PPYHD_NPVOP	POLYHEDRIN	MANESTRA BRASSICAE NUCLEAR POLYHEDROSIS VIRUS										14-48							
PPYHD_NPVOS	POLYHEDRIN	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS										13-47							
PPYHD_NPVPE	POLYHEDRIN	ORGANIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHEDROSIS VIRUS										14-48							
PPYHD_NPVSE	POLYHEDRIN	PANOLIS FLAMMEA MULTIPLE NUCLEOCAPSID POLYHEDROSIS VIRUS										14-48							
PPYHD_NPVSE	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDROSIS VIRUS (STRAIN 14-48)										14-48							
PPYHD_NPVSL	POLYHEDRIN	SPODOPTERA FRUGIPERA NUCLEAR POLYHEDROSIS VIRUS										14-48							
PRASK_MSVKI	POLYHEDRIN	SPODOPTERA LITTORALIS NUCLEAR POLYHEDROSIS VIRUS										17-51							
PREV_BIV27	TRANSFORMING PROTEIN 21	KIRSTEN MURINE SARCOMA VIRUS										142-176							
PREV_EIAV9	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)										77-115							
PREV_EIAVC	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)										51-89							
PREV_EIAVY	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)										51-89							
PREV_HVI12	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)										81-119							
PREV_HVI12	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CLONE 12)										35-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)										32-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)										35-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRH1 ISOLATE)										25-59							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRH1 ISOLATE)										22-59							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)										35-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)										32-66							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)										35-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRC5F ISOLATE)										29-63							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)										31-66							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)										31-66							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OVI ISOLATE)										32-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (P22 ISOLATE) AN										35-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)										32-69							
PREV_HVI1B1	REV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)										32-69							
PREV_HVI1B1	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM153 ISOLATE)										26-77							
PREV_HVI1B1	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM153 ISOLATE)										26-77							
PREV_HVI1B1	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR)										28-75							
PREV_HVI1B1	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)										33-67							
PREV_HVI1B1	REV PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS										21-62							
PREV_HVI1B1	REV PROTEIN	VIRUS LENTIVIRUS (STRAIN 1514)										7-41	88-133	635-683					
PRR1_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)										213-247	689-723						
PRR1_HCMVA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EPSTEIN-BARR VIRUS (STRAIN B95-8)																	

PCGENE	ALLMOTIS	ALL Viruses (no bacteriophage)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILE NAME	PROTEIN	VIRUS	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
PRR1_HSVB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	632-668							
PRR1_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4F)	76-110							
PRR1_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	HERPESVIRUS SAIMIRI (STRAIN 11)	324-365							
PRR1_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-402							
PRR1_VARY	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VACCINIA VIRUS (STRAIN WR)	367-402							
PRR1_VZVD	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARIOLA VIRUS	367-402							
PRR2_EBV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE LAR	VARICELLA-ZOSTER VIRUS (STRAIN DUNA5)	223-257							
PRR2_HSVB3	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	EPSTEIN-BARR VIRUS (STRAIN B95-8)	89-137							
PRR2_HSVB	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	101-135							
PRR2_HSVSA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4F)	106-140							
PRR2_SFVKA	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	HERPESVIRUS SAIMIRI (STRAIN 11)	125-159							
PRR2_VACCC	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	SHOPE FIBROBLAST VIRUS (STRAIN KASZA)	98-132							
PRR2_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	VACCINIA VIRUS (STRAIN COPENHAGEN)	98-132							
PRR2_VACCV	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	VACCINIA VIRUS (STRAIN L-1VP)	98-132							
PRR2_VARY	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	VACCINIA VIRUS (STRAIN WR)	98-132							
PRR1_HSVTH	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE SNA	VARIOLA VIRUS	98-132							
PRP4_VACCV	NEUROVIRULENCE FACTOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	171-212							
PRP4_VARY	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	116-150	465-540	757-791					
PRP1_VACCC	RNA-POLYMERASE-ASSOCIATED TRANSCRIPTION	VARIOLA VIRUS	41-75	116-150	465-540	757-791				
PRP1_VACCV	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	243-291	622-656	754-791	954-988	1006-1057			
PRP1_VARY	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	243-291	622-656	754-791	954-988	1024-1058			
PRP2_CAPVK	DNA-DIRECTED RNA POLYMERASE 147 KD POLYPE	VARIOLA VIRUS	243-291	622-656	754-791	954-988	1006-1057			
PRP2_COWPX	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	CAPPOXYVIRUS (STRAIN K5-1)	19-60	114-155	589-630					
PRP2_VACCV	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	COWPOX VIRUS	211-245	359-400	833-874					
PRP2_VARY	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	211-245	359-400	833-874					
PRP4_VACCC	DNA-DIRECTED RNA POLYMERASE 132 KD POLYPE	VARIOLA VIRUS	62-116							
PRP4_VACCV	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-116							
PRP4_VARY	DNA-DIRECTED RNA POLYMERASE 35 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	62-116							
PRP5_VACCC	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPE	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-71							
PRP5_VACCV	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPE	VACCINIA VIRUS (STRAIN WR)	1-71							
PRP5_VARY	DNA-DIRECTED RNA POLYMERASE 30 KD POLYPE	VARIOLA VIRUS	1-71							
PRP6_VACCV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPE	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	25-59							
PRP7_VACCV	DNA-DIRECTED RNA POLYMERASE 22 KD POLYPE	VARIOLA VIRUS	25-59							
PRP7_VARY	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPE	VACCINIA VIRUS (STRAIN WR) AND (STRAIN COPENHAGEN)	43-93							
PRP8_VACCV	DNA-DIRECTED RNA POLYMERASE 19 KD POLYPE	VARIOLA VIRUS	43-93							
PRP8_VARY	DNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1567	1721-1758	1958-1992	2109-2157				
PRR1_LAANN	RNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	1083-1117	1477-1518	1633-1673					
PRR1_LABEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	171-242	279-313						
PRR1_LADUN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/BEIJING/1/56)	171-242	279-313	350-391					
PRR1_LAGUR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/DUNEDIN/4/73)	171-242	279-313						
PRR1_LAHLO	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/GULLNAR/14/77)	171-242	279-313						
PRR1_LAITE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/ONDON/14/673)	168-242	279-313						
PRR1_LAKIE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/EQUINE/TENNESSEE/5/66)	168-242	279-313						
PRR1_LAKOR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN AKIEV/59/79)	171-242	279-313						
PRR1_LALEI	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN AKOREA/42/68)	171-242	279-313						
PRR1_LALEJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ENINGRAD/13/457)	171-242	279-313						
PRR1_LALEJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ENINGRAD/13/41/57)	171-242	279-313						
PRR1_LAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/ENINGRAD/13/47/57)	171-242	279-313						
PRR1_LAMES	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NEW YORK/6750/78)	171-242	279-313						
PRR1_LANT6	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NEW YORK/6750/78)	171-242	279-313						
PRR1_LAPUE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P1	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	171-242	279-313						

PCGENE	ALL MOTIFS	ALL VIRUSES (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILE NAME	PROTEIN	VIRUS								
PRRPL_SEOUB	RNA POLYMERASE BETA SUBUNIT	SENDAL VIRUS (STRAIN Z)	309-343	340-500	612-656	747-781	1064-1119	1239-1280	1499-1536	2000-2034
PRRPL_SY5WR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	2146-2216	174-208	537-591	655-696	731-765	1742-1776	1947-1981	1993-2027
PRRPL_SY5V	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	547-627	747-781	1225-1280	1319-1353	1592-1626	1676-1715	2024-2038	
PRRPL_TS5VB	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	760-794	825-839	977-1014	1089-1137	1978-2032	2059-2107		
PRRPL_UUK	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH/BR)	46-101	399-433	539-573	589-634	1119-1153	1195-1236	1321-1379	1538-1572
PRRPL_VSVH	RNA POLYMERASE	UUKUNIEMI VIRUS	1684-1725	1857-1898	2073-2127	2156-2200	2206-2247	2315-2368	2378-2419	2809-2843
PRRPL_VSVJO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA)	127-183	282-323	836-874	1030-1071	1481-1515	2015-2049	2061-2098	
PRRPL_VSVSJ	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRA)	319-358	674-715	1522-1567	1802-1836				
PRRPL_ACLS	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	319-358	674-715	720-763	1802-1836				
PRRPL_BWYF	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	674-715	720-763	1019-1074	1742-1799	2066-2107			
PRRPL_BYDVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BET WESTERN YELLOW VIRUS (ISOLATE FL-1)	228-262	557-596	916-950	1235-1269				
PRRPL_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	304-341							
PRRPL_BYDVP	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	234-285							
PRRPL_CARMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	234-285							
PRRPL_CGMVS	PROBABLE RNA-DIRECTED RNA POLYMERASE	CARNATION MOTTLE VIRUS	93-131							
PRRPL_IBDVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STR)	7-41	387-428	446-480	726-767	1445-1479			
PRRPL_IBDVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 5270)	384-432	446-484						
PRRPL_IPNV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRAL)	144-185	266-307	709-757	771-809				
PRRPL_IPNV5	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	147-181	268-407	501-535	750-802				
PRRPL_LYCV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	147-181	366-407	501-535	751-802				
PRRPL_LYCVW	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRON)	301-346	805-886	926-960	1509-1543	2090-2124			
PRRPL_MCMV	RNA POLYMERASE	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN WE)	301-345							
PRRPL_PEAHV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS	181-215	697-731						
PRRPL_PLRV	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	321-358							
PRRPL_PLRVW	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1)	336-373	423-457						
PRRPL_PPMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	336-373	423-457						
PRRPL_RCMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	321-362	402-454	627-661	862-896				
PRRPL_REOVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS	666-700							
PRRPL_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	310-361							
PRRPL_REOVL	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN D3/ONES)	310-361							
PRRPL_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN LANG)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPL_ROTBU	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	60-96	133-167	204-245	535-569	579-631	639-686	690-724	771-805
PRRPL_ROTPT	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	3-44	255-299	335-397	476-510	518-620	966-1007		
PRRPL_ROTPT	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	62-96	133-167	336-377	581-631	636-686	690-724	771-842	
PRRPL_ROTPT	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	60-96	133-167	336-377	581-631	639-686	690-724	771-805	
PRRPL_SBMV	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	60-96	133-167	336-377	581-631	639-686	690-724	771-805	
PRRPL_SCVLA	PROBABLE RNA-DIRECTED RNA POLYMERASE	SOUTHERN DEAN MOSAIC VIRUS	628-665							
PRRPL_TACV	RNA-DIRECTED RNA POLYMERASE	SACCHARINOMYCES CEREBISIAE VIRUS L-A	100-134	147-191						
PRRPL_TMGMV	RNA POLYMERASE	TACARIBE VIRUS	155-204	220-278	375-416	484-518	891-925	1030-1081	1285-1319	1981-2015
PRRPL_TMY	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	401-449	682-720	765-818					
PRRPL_TMYK	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE)	3-37	401-453	665-699					
PRRPL_TMYTO	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN)	3-37	401-453	665-699					
PRRPL_TMYVD	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	3-37	401-453	860-894					

PCGENE	ALLMOTIS	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS	102-144							
PRPP_BRSA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D)								
PRPP_CDVO	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-158	160-216						
PRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTPOORT)	312-373							
PRPP_HRSV1	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-158	160-216						
PRPP_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 1)	99-158	160-216						
PRPP_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-158	160-216						
PRPP_MEASE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN 1)	99-158	160-216						
PRPP_MEASI	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-374	460-495						
PRPP_MEASY	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-374	460-495						
PRPP_MUM01	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-374	460-495						
PRPP_MUM0E	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	149-183	213-275						
PRPP_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	214-276							
PRPP_NDVA	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	214-276							
PRPP_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/2)	100-134							
PRPP_PIIBB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45)	100-138							
PRPP_PIIBC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C31)	80-114	313-364	375-437					
PRPP_PIIBD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	80-114	313-364	375-437					
PRPP_PIIBE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-573)	80-114	313-364	375-437					
PRPP_PICB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14830)	66-114	237-271	313-364	375-437				
PRPP_PICHT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	218-281							
PRPP_PIBB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	218-281							
PRPP_PIBH	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	31-130	414-470						
PRPP_PIBHA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	410-499							
PRPP_PIBHB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38	222-285						
PRPP_PIRVY	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333)	222-285							
PRPP_RABVA	RNA POLYMERASE ALPHA SUBUNIT	PRY VIRUS	137-174							
PRPP_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN AVOI)	93-127							
PRPP_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	93-127							
PRPP_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN ERA), AND (STRAIN PM)	93-127							
PRPP_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127							
PRPP_SEND3	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	93-127							
PRPP_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN Z / HOST MUTANTS)	313-364	375-447						
PRPP_SEND7	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN 694)	323-364	375-447						
PRPP_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN FUSHIM)	313-364	375-447						
PRPP_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN HARRIS)	313-364	375-447						
PRPP_SVS	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN Z)	313-364	375-447						
PRPP_SYNV	RNA POLYMERASE ALPHA SUBUNIT	SMAN VIRUS 5 (STRAIN W3)	205-278							
PRPP_VSVIG	RNA POLYMERASE ALPHA SUBUNIT	SONCHUS YELLOW NET VIRUS	138-173	233-281						
PRPP_VSVIM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN C3-43)	3-43							
PRPP_VSVIO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN M1-41)	3-43							
PRPP_VSVJ1	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN 3-37)	3-37							
PSPH_AMEPV	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN 3-37)	3-43							
PSPI2_VACC	SPHEROIDIN	VACCINIA VIRUS (STRAIN SAN JUAN)	223-264	361-395						
PSPI2_VARV	SERINE PROTEINASE INHIBITOR	VACCINIA VIRUS (STRAIN WR)	21-86							
PSPI3_VACC	SERINE PROTEINASE INHIBITOR 2	VARIOLA VIRUS	21-86							
PSPI3_VACCV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-167	225-266						
PSPI3_VARV	SERINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN WR)	118-167	225-266						

PCGENE	ALLMOTIS	ALL Viruses (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILENAME	PROTEIN	VIRUS	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
PTUN_AVIS1	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 12	443-491	497-538						
PTMAF_AVIS4	TRANSFORMING PROTEIN JUN	AVIAN SARCOMA VIRUS (STRAIN 17)	210-284							
PTOP1_SFVKA	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOPONEUROTIC FIBROSARCOMA VIRUS AS42	247-288	295-340						
PTOP2_ASFM2	DNA TOPOISOMERASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	127-183	269-310						
PTOP2_ASFM2	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE BA71V)	146-180	481-515	601-642	945-979	1038-1093	1123-1162		
PTIS5_SNSAV	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	146-180	480-514	600-641	902-936	944-978	1038-1091	1122-1161	
PTISY_VZVD	PDGF-RELATED TRANSFORMING PROTEIN P28-SIS	SMIAN SARCOMA VIRUS	16-71							
PUBIL_NVPOR	THYMIDYLATE SYNTHASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	215-260							
PUL01_HCMVA	UBIQUITIN-LIKE PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS 43-80	169-203							
PUL02_HSV11	HYPOTHETICAL PROTEIN UL1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	94-128							
PUL03_HSV2H	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	92-126							
PUL03_HSV2H	PROTEIN UL3	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG53)	102-136							
PUL04_HSV11	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-145							
PUL04_HSV11	PROTEIN UL4	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	104-145	313-347	376-410					
PUL06_HCMVA	VRION PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	216-250							
PUL06_HSV11	HYPOTHETICAL PROTEIN UL6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	36-94	103-141	294-329	337-371	416-479			
PUL06_HSV11	VRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	62-170	357-413	448-503					
PUL06_HSV11	VRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	90-140	151-194	302-336	364-405				
PUL06_HSV11	VRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	87-131	350-409	704-738					
PUL06_VZVD	VRION GENE 54 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	6-50							
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	174-208							
PUL09_HSV2B	ORIGIN OF REPLICATION BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	122-163							
PUL09_VZVD	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)								
PUL11_HCMVA	ORIGIN OF REPLICATION BINDING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)								
PUL13_HCMVA	NONSENSE									
PUL14_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-81	185-227						
PUL14_HSV2B	HYPOTHETICAL PROTEIN UL14	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	305-343							
PUL14_PRVN3	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	52-96	246-283						
PUL14_VZVD	UL14 PROTEIN HOMOLOG	PSEUDORABIES VIRUS (STRAIN NIA-3)	43-95							
PUL16_HSV2B	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	61-103							
PUL17_HSV6J	GENE 46 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	266-300							
PUL21_HSV2B	PROTEIN 10R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	239-280							
PUL23_HCMVA	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-78	421-474						
PUL24_HCMVA	HYPOTHETICAL PROTEIN UL23	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-233							
PUL24_ILTVT	HYPOTHETICAL PROTEIN UL24	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-39							
PUL25_HCMVA	PROTEIN UL24 HOMOLOG	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V88)	161-195							
PUL25_HSV2B	VRION PROTEIN UL25	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	255-341	351-399						
PUL25_HSV2B	VRION PROTEIN UL25	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	370-411							
PUL25_HSV2B	VRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	364-413							
PUL25_VZVD	64.1 KD VRION PROTEIN	INFECTIOUS LARVINGOTRACHEITIS VIRUS (STRAIN THORNE V88)	38-84	183-231	365-406					
PUL27_HCMVA	HYPOTHETICAL PROTEIN UL27	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	300-388	165-206						
PUL31_HSV2B	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	244-285							
PUL31_VZVD	GENE 29 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	153-187							
PUL32_HSV2B	GENE 27 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	163-197							
PUL32_VZVD	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (STRAIN AB1)	342-376							
PUL33_HCMVA	PROBABLE MAJOR ENVELOPE GLYCOPROTEIN 26	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	72-106	296-344						
PUL33_VZVD	G-PROTEIN COUPLED RECEPTOR HOMOLOG UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	94-135	309-352						
PUL34_EBV	GENE 25 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	29-63							
PUL34_HCMVA	BBRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-200							
PUL34_HSV11	HYPOTHETICAL PROTEIN UL34	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	113-147							
PUL35_HCMVA	VRION PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	187-221							
PUL37_EBV	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	231-268							

PCGENE	ALL MOTIFS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	708-742							
PUL37_HSV11	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	833-891							
PUL37_HSVB	PROTEIN UL37	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	82-137	311-345	614-648	715-750	781-822			
PUL37_HSVSA	GENE 21 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	6-65	682-741						
PUL37_VZVD	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	719-753	786-827						
PUL38_HCMVA	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	10-51							
PUL41_VZVD	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	330-366							
PUL42_HSV11	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	134-168							
PUL42_HSVB	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	138-172	221-263						
PUL43_HCMVA	DNA-BINDING GENE 18 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	72-109							
PUL43_HSVB	HYPOTHETICAL PROTEIN UL43	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	27-68							
PUL43_VZVD	MEMBRANE PROTEIN UL43 HOMOLOG	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	312-363							
PUL45_HSVIK	GENE 13 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	27-68							
PUL45_HSVIM	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	96-137							
PUL47_HCMVA	PROTEIN UL45	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	96-137							
PUL47_HSVIF	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-165	448-485	745-856					
PUL47_HSVBP	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	473-518							
PUL47_HSVB	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	473-518							
PUL47_HSVB	80.7 KD ALPHA TRANS-INDUCING PROTEIN	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	561-612							
PUL47_HSVB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	183-246	582-620	825-866					
PUL47_VZVD	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	219-253	371-412	817-866					
PUL50_HCMVA	ALPHA TRANS-INDUCING FACTOR 91.8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	84-135	156-209	664-701					
PUL51_HSV11	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	155-189							
PUL51_HSVB	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	118-169							
PUL51_VZVD	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	121-162							
PUL52_EBV	GENE 7 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	120-161							
PUL52_HSV11	PROBABLE DNA REPLICATION PROTEIN BSLF1	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	122-163							
PUL52_HSVB	DNA REPLICATION PROTEIN UL52	EPSTEIN-BARR VIRUS (STRAIN B95-8)	188-255							
PUL52_HSVSA	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-223							
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	141-182	959-970						
PUL53_HCMVA	PROBABLE DNA REPLICATION GENE 6 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	445-483							
PUL53_HSV2H	PROTEIN UL53	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-342							
PUL54_HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	12-48							
PUL70_HCMVA	HYPOTHETICAL PROTEIN UL64	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG32)	151-185							
PUL74_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	32-73							
PUL87_HSV60	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	39-99							
PUL87_HSVSA	HYPOTHETICAL PROTEIN 3R	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-79							
PUL88_HCMVA	HYPOTHETICAL GENE 24 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	729-770							
PUL91_HSVSA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	366-400	582-616						
PUL92_EBV	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	357-391							
PUL92_HCMVA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	24-58							
PUL92_HSV60	HYPOTHETICAL PROTEIN BOLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	188-222						
PUL92_HSVSA	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-116							
PUL93_HCMVA	HYPOTHETICAL GENE 31 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	101-145	174-216						
PUL93_HSV60	HYPOTHETICAL PROTEIN UL93	HERPESVIRUS SAIMIRI (STRAIN 11)	88-122							
PUL96_HCMVA	HYPOTHETICAL PROTEIN 13R	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	23-57	299-384						
PUL96_HSV60	HYPOTHETICAL PROTEIN UL96	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	34-71	259-293						
PUL96_HSVSA	HYPOTHETICAL PROTEIN 14R	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	73-151	233-270						
PUL96_HCMVA	HYPOTHETICAL GENE 35 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	51-103							
PUL96_HCMVA	HYPOTHETICAL PROTEIN UL102	HERPESVIRUS SAIMIRI (STRAIN 11)	53-113							
PUL96_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	45-100							
PUL96_HCMVA		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-40	758-792						
PUL96_HCMVA		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1-56	130-171	330-364	439-492	541-575			

PGCENE	ALL MOTHS	ALL VIRUSES (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PUNG_HSV11	HYPOHETICAL PROTEIN UL100	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	84-125							
PUNG_HSV23	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	227-268							
PUNG_HSV2H	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 331)	188-229							
PUNG_HSV5A	URACIL-DNA GLYCOSYLASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 11032)	148-189							
PUNG_SFVKA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176							
PUS02_HSVEB	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115							
PUS02_HSVFK	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	79-120							
PUS07_HOMVA	US1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	86-120							
PUS11_HOMVA	HYPOHETICAL PROTEIN HDL F5		2-36							
PUS14_HOMVA	HYPOHETICAL PROTEIN HDL F1	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)								
PUS18_HOMVA	HYPOHETICAL PROTEIN HDL F4	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	3-51							
PUS23_HOMVA	MEMBRANE PROTEIN HDL F5	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	187-225							
PUS24_HOMVA	HYPOHETICAL PROTEIN HDL F7	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	294-335	535-578						
PUS26_HOMVA	HYPOHETICAL PROTEIN HDL F6	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	135-172							
PUS27_HOMVA	HYPOHETICAL PROTEIN HDL F5	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	535-584							
PUS10_HOMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	6-40							
PV125_AMYLE	HYPOHETICAL PROTEIN HRKF5	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	135-169	274-312						
PV143_NPVAC	125 KD PROTEIN	ALFAIFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	18-52	326-367	591-649					
PV16K_TRVPS	HELICASE	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	313-350	1114-1150	1179-1213					
PV16K_TRVSV	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PSQ)	75-117							
PV1A_BMV	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM)	75-117							
PV1A_CCMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS	21-55	349-405	492-526	710-731	837-884	890-924		
PV1A_CMVFN	1A PROTEIN	BROME MOSAIC VIRUS	4-66	348-411						
PV1A_CMVQ	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	4-53	242-276	348-389	487-526				
PV1A_CMVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-66	393-434	584-619	868-916				
PV1A_PSVI	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434	584-619	868-916				
PV1A_TAV	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-66	393-434						
PV2JK_HSVTH	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	4-66							
PV24K_BDV	23.3 KD PROTEIN	TOMATO ASPERMY VIRUS	11-59	392-433	837-923					
PV23K_NPVAC	24 KD ANTIGEN	TURKEY HERPESVIRUS (STRAIN H2)	177-211							
PV28K_PLRV1	25 KD PROTEIN	BORNA DISEASE VIRUS	63-121	120-171						
PV28K_PLRVW	28 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	4-50							
PV290_ASELS	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I)	116-150							
PV29K_PEBV	LIS 290 PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	116-150							
PV29K_TRVSY	29.6 KD PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	138-183							
PV29K_TRVTC	29 KD PROTEIN	EARLY BROWNING VIRUS	115-192							
PV2A_CCMV	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN SYM), AND (STRAIN PSQ)	167-201							
PV2A_CMVFN	2A PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	45-79							
PV2A_PSVI	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	768-806							
PV2A_TAV	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	386-420							
PV20K_TRVTC	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	717-751							
PV160_ASF7	29.1 KD PROTEIN	TOMATO ASPERMY VIRUS	722-756							
PV162_ASF7	K360 PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	105-218							
PV163_ASF7	K362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	53-87	151-192						
PV1A_BMV	D763 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	54-102	161-212	290-324					
PV1A_CMVFN	3A PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	153-199							
PV1A_CMVQ	3A PROTEIN	BROME MOSAIC VIRUS	11-45							
PV1A_CMVQ	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	215-255							
PV1A_CMVQ	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN M)	215-255							
PV1A_CMVQ	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	215-255							
PV31K_ACLSV	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	215-255							

PCGENE	ALLMOTIS	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV31K_BWTVF	50.8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS	72-106							
PV31K_BWTVG	51 KD PROTEIN	BEEET WESTERN YELLOW VIRUS (ISOLATE FL-1)	113-147	196-233	404-451					
PV36K_PLRV1	51 KD PROTEIN	BEEET WESTERN YELLOW VIRUS (ISOLATE GBI)	113-147	196-233	407-451					
PV36K_PLRVV	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	47-81	438-472						
PV38K_BSMV	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	47-81	438-475						
PV66K_BWTVF	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-162	323-371						
PV70K_PLRV1	66.2 KD PROTEIN	BEEET WESTERN YELLOW VIRUS (ISOLATE FL-1)	480-521							
PV70K_PLRVV	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	98-144	514-548						
PV90K_AMYLE	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	98-144	409-443	514-548					
PVA04_VACCC	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-141							
PVA04_VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	32-66	231-275						
PVA04_VARV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	32-66	231-275						
PVA06_VACCC	PROTEIN A6	VARIOLA VIRUS	22-66	210-265						
PVA06_VACCV	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-213	314-355						
PVA06_VARV	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	96-212	313-354						
PVA08_VACCC	PROTEIN A8	VARIOLA VIRUS	97-213	313-358						
PVA08_VARV	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-236							
PVA09_VACCC	PROTEIN A9	VARIOLA VIRUS	176-236							
PVA09_VARV	PROTEIN A9	VACCINIA VIRUS (STRAIN COPENHAGEN)	46-81							
PVA11_VACCC	PROTEIN A11	VARIOLA VIRUS	46-95							
PVA11_VARV	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	97-134	141-175	219-283					
PVA12_VACCC	PROTEIN A12	VARIOLA VIRUS	98-176	220-284						
PVA12_VARV	PROTEIN A12	VACCINIA VIRUS (STRAIN COPENHAGEN)	114-148							
PVA18_VACCC	PROTEIN A18	VARIOLA VIRUS	111-152							
PVA18_VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	433-467							
PVA18_VARV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	307-341	433-467						
PVA20_VACCC	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	307-341	433-467						
PVA20_VARV	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-67							
PVA22_VACCC	PROTEIN A22	VARIOLA VIRUS	1-67							
PVA22_VARV	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-69							
PVA23_VACCC	PROTEIN A23	VARIOLA VIRUS	30-80							
PVA23_VARV	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-143	173-207	255-289	344-382				
PVA31_VACCC	PROTEIN A31	VARIOLA VIRUS	95-143	173-207	255-289	344-382				
PVA31_VARV	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-126							
PVA32_VACCC	PROTEIN A32	VARIOLA VIRUS								
PVA32_VARV	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)								
PVA33_VACCC	PROTEIN A33	VARIOLA VIRUS	217-251							
PVA33_VARV	PROTEIN A33	VACCINIA VIRUS (STRAIN WR)	63-97							
PVA36_VACCV	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	26-67	109-155						
PVA37_VACCC	PROTEIN A37	VARIOLA VIRUS	26-67							
PVA37_VARV	PROTEIN A37	VACCINIA VIRUS (STRAIN COPENHAGEN)	24-65							
PVA38_VACCC	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	24-65							
PVA38_VARV	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-91							
PVA39_VACCC	PROTEIN A39	VACCINIA VIRUS (STRAIN WR)	44-91							
PVA39_VARV	PROTEIN A39	VARIOLA VIRUS	44-91							
PVA46_VACCC	PROTEIN A46	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71							
PVA46_VARV	PROTEIN A46	VACCINIA VIRUS (STRAIN WR)	75-109							
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-126							
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	81-126							
PVA47_VACCV	PROTEIN A47	VARIOLA VIRUS	81-126							
PVA47_VACCC	PROTEIN A47	VACCINIA VIRUS (STRAIN COPENHAGEN)	62-96	143-184						
PVA47_VARV	PROTEIN A47	VACCINIA VIRUS (STRAIN WR)	62-96	143-184						

PCGENE	ALLMOTIS	ALL Viruses (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILENAME	PROTEIN	VIRUS	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
PVA49_VACCC	PROTEIN A47	VARIOLA VIRUS	62-96	147-184						
PVA49_VACCV	PROTEIN A49	VACCINIA VIRUS (STRAIN COPENHAGEN)	1-40	126-160						
PVA49_VARV	PROTEIN A49	VACCINIA VIRUS (STRAIN WR)	1-40	126-160						
PVA52_VACCC	PROTEIN A49	VARIOLA VIRUS	1-40	126-160						
PVA52_VACCV	PROTEIN A52	VACCINIA VIRUS (STRAIN COPENHAGEN)	91-132							
PVA57_VACCC	PROTEIN A52	VACCINIA VIRUS (STRAIN WR)	91-132							
PVA57_VACCV	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	134-168							
PVAL1_MSVK	GUANYLATE KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	134-168							
PVAL1_MSVN	ALI PROTEIN	MAIZE STREAK VIRUS (KENYAN ISOLATE)	220-269							
PVAL1_MSVS	ALI PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	228-262							
PVAL1_SLCV	ALI PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	228-262							
PVAL1_TYDVA	ALI PROTEIN	SQUASH LEAF CURL VIRUS	117-151							
PVAL3_AUNVW	ALI PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	191-225							
PVAL3_BGNV	ALI PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	44-78	83-124						
PVAL3_PYNV	ALI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	44-78	83-124						
PVAL3_SLCV	ALI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	30-78	87-121						
PVAL3_TGMV	ALI PROTEIN	SQUASH LEAF CURL VIRUS	46-80	91-125						
PVAL3_TGMV	ALI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	44-78							
PVAL3_TGMV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	84-127						
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	22-70							
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	91-127						
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NV153)	22-70	91-127						
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NV147)	22-70	91-127						
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	22-70	91-130						
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	36-70							
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	CARNATION ETCHED RING VIRUS	99-138							
PVAL3_TGMV	APHID TRANSMISSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	108-142							
PVB04_VACCC	PROTEIN B3	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-123	321-372	496-530					
PVB04_VACCV	PROTEIN B4	VACCINIA VIRUS (STRAIN WR)	89-123	321-372						
PVB04_VARV	PROTEIN B4	VARIOLA VIRUS	89-134	324-372	492-530					
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LC16MO)	234-298							
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	234-298							
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN LISTER)	234-298							
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	234-298							
PVB07_VACCC	PROTEIN B7 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-62							
PVB08_VACCC	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	26-60							
PVB08_VACCV	PROTEIN B8 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	26-60							
PVB18_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375	491-532						
PVB18_VACCV	PROTEIN B18	VACCINIA VIRUS (STRAIN WR)	337-375	491-532						
PVB18_VARV	PROTEIN B18	VARIOLA VIRUS	337-378	491-532						
PVB19_VACCC	PROTEIN B18	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-121							
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN DAIREN I)	85-119							
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN WR)	85-119							
PVB20_VACCC	SURFACE ANTIGEN S PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-85							
PVB21_VACCV	PROTEIN B20	VACCINIA VIRUS (STRAIN WR)	61-95							
PVB21_VACCV	PROTEIN B21	BEAN GOLDEN MOSAIC VIRUS	159-193							
PVB21_SLCV	BL1 PROTEIN	SQUASH LEAF CURL VIRUS	159-193							
PVB21_TGMV	BL1 PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	172-206							
PVB21_TGMV	BL1 PROTEIN	BEAN GOLDEN MOSAIC VIRUS	20-61							
PVB21_TGMV	BL1 PROTEIN	SQUASH LEAF CURL VIRUS	25-59							
PVB22_VACCC	PROTEIN C2	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-82	262-302	391-442					

PCGENE	ALL MOTIFS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVC04_SFVKA	PROTEIN C2	VACCINIA VIRUS (STRAIN WR)	37-82	262-302	391-442					
PVC04_VACCC	PROTEIN C4	SHOPE FIBRONA VIRUS (STRAIN KASZA)	175-223	374-408						
PVC04_VACCV	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46							
PVC04_VARV	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46							
PVC05_SFVKA	PROTEIN C4	VARIOLA VIRUS	12-46							
PVC05_VACCC	HYPOTHEICAL PROTEIN C3	SHOPE FIBRONA VIRUS (STRAIN KASZA)	82-125							
PVC05_VACCV	PROTEIN C3	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-68							
PVC05_VARV	PROTEIN C3	VACCINIA VIRUS (STRAIN WR)	31-68							
PVC08_SFVKA	PROTEIN C3	VARIOLA VIRUS	32-70	73-121						
PVC08_SFVKA	HYPOTHEICAL PROTEIN C8	SHOPE FIBRONA VIRUS (STRAIN KASZA)	45-86							
PVC09_SFVKA	HYPOTHEICAL PROTEIN C9	SHOPE FIBRONA VIRUS (STRAIN KASZA)	63-106							
PVC09_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-116	168-226	289-325	575-612				
PVC10_VACCC	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	82-116	168-226	289-323	575-612				
PVC10_VACCV	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180							
PVC10_VARV	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-176							
PVC12_SFVKA	PROTEIN C10	VARIOLA VIRUS	136-170							
PVC13_SFVKA	HYPOTHEICAL PROTEIN C12	SHOPE FIBRONA VIRUS (STRAIN KASZA)	2-36							
PVC16_VACCC	PROTEIN C13	SHOPE FIBRONA VIRUS (STRAIN KASZA)	3-66	137-182	189-240					
PVC17_VACCC	PROTEIN C16/B22	VACCINIA VIRUS (STRAIN COPENHAGEN)	142-176							
PVC18_VACCC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	100-155	325-359						
PVC19_SFVKA	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-98							
PVC19_VACCC	PROTEIN C19	VACCINIA VIRUS (STRAIN KASZA)	56-97							
PVCAP_EBV	PROTEIN C19/B23	SHOPE FIBRONA VIRUS (STRAIN COPENHAGEN)	218-252							
PVCAP_HCNVA	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-184	670-709						
PVCAP_HSV11	MAJOR CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	136-174	191-225	260-294					
PVCAP_HSV6U	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-175	308-356						
PVCAP_HSV6B	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS	136-174	230-266	311-382					
PVCAP_HSV5A	MAJOR CAPSID PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP)	150-184	304-352						
PVCAP_PRVIS	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	479-520	673-714	755-799					
PVCAP_VZVD	MAJOR CAPSID PROTEIN	HERPESVIRUS ZOSTER VIRUS (STRAIN INDIANA S)	105-160	292-326						
PVC03_NPVAC	MAJOR CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN INDIANA S)	128-198	316-350						
PVC03_FOWP1	DNA-BINDING PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	110-248							
PVD03_VACCC	92.6 KD PROTEIN	FOWLPOX VIRUS (STRAIN FP-1)	145-181							
PVD05_VACCV	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-157							
PVD09_VACCV	PROTEIN D5	VARIOLA VIRUS	123-157							
PVD09_VACCC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	126-160							
PVD09_VARV	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	126-160							
PVD10_FOWP1	PROTEIN D9	VARIOLA VIRUS	65-99	188-222						
PVD10_SFVKA	PROTEIN D10	FOWLPOX VIRUS (STRAIN FP-1)	4-52							
PVD10_VARV	PROTEIN D10	SHOPE FIBRONA VIRUS (STRAIN KASZA)	67-103							
PVDBP_CAMVC	PROTEIN D10	VARIOLA VIRUS	1-35							
PVDBP_CAMVD	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	1-35							
PVDBP_CAMVE	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	1-35							
PVDBP_CAMVN	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN B/C)	1-35							
PVDBP_CAMVS	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8133)	1-35							
PVE02_VACCC	DNA-BINDING PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	1-35							
PVE02_VACCV	PROTEIN E2	VACCINIA VIRUS (STRAIN COPENHAGEN)	282-336							
PVE02_VARV	PROTEIN E2	VACCINIA VIRUS (STRAIN WR)	282-336							
PVE03_VACCC	PROTEIN E3	VARIOLA VIRUS	17-61							
PVE03_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-61							
PVE03_VARV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	17-61							

PCGENE	ALL MOTIS	ALL Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	17-61							
PVE05_VACCC	PROTEIN E3	VARIOLA VIRUS	28-93							
PVE05_VACCD	PROTEIN E3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-103							
PVE05_VACCV	PROTEIN E3	VACCINIA VIRUS (STRAIN DAIREN I)	38-103							
PVE05_VARV	PROTEIN E3	VACCINIA VIRUS (STRAIN WR)	38-103							
PVE06_VACCC	PROTEIN E3	VARIOLA VIRUS	105-139	232-266						
PVE06_VACCV	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-139	232-266						
PVE06_VARV	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	105-139	232-266						
PVE18_NPVAC	PROTEIN E6	VARIOLA VIRUS	112-163	367-401						
PVE1_HPV1A	EARLY 18.5 KD PROTEIN	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	137-171							
PVE1_HPV31	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 1A	56-90							
PVE1_HPV33	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 31	31-67	133-167						
PVE1_HPV35	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 33	56-90							
PVE1_HPV39	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 35	59-96							
PVE1_HPV41	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 39	55-89	312-346						
PVE1_HPV42	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 41	25-87							
PVE1_HPV48	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 42	33-67	119-174						
PVE1_HPV68	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 58	265-299							
PVE1_PAPVE	E1 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 68	176-210							
PVE6_NPVAC	E1 PROTEIN	EUROPEAN ELK PAPILLOMA VIRUS	72-117							
PVE2_CRPVK	EARLY 25.9 KD PROTEIN	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	3-44							
PVE2_HPV05	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHORE) PAPILLOMA VIRUS (STRAIN KANS)	5-57	276-310	342-383	437-471				
PVE2_HPV08	PROBABLE E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 5	5-55	148-182						
PVE2_HPV16	PROBABLE E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 8	61-105	315-349						
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 16	65-100							
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 18	3-37	159-193						
PVE2_HPV2A	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 1A	13-47	159-193						
PVE2_HPV31	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 2A	61-105							
PVE2_HPV33	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 31	63-101	297-331						
PVE2_HPV35	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 33	62-106	158-192						
PVE2_HPV39	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 35	74-110	323-357						
PVE2_HPV41	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 39	6-54							
PVE2_HPV47	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 41	5-55	148-182						
PVE2_HPV51	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 47	154-191							
PVE2_HPV57	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 51	13-47	179-213						
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 57	2-36							
PVE2_HPV58	E2 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 58	5-57							
PVE2_PAPVD	PROBABLE E2 PROTEIN	DEER PAPILLOMA VIRUS	107-141							
PVE2_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMA VIRUS	113-150							
PVE2_PCPV1	PROBABLE E2 PROTEIN	PYGMY CHIMPANZEE PAPILLOMA VIRUS TYPE 1	318-361							
PVE2_RHPV1	E2 PROTEIN	RHESUS PAPILLOMA VIRUS TYPE 1	62-106	307-341						
PVE39_NPVAC	E2 PROTEIN	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	20-57							
PVE39_NPVOP	EARLY 39 KD PROTEIN	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	119-156							
PVE4_HPV18	EARLY 39 KD PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 18	42-86							
PVE4_HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 41	63-97							
PVE3_HPV58	PROBABLE E4 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 58	3-40	96-130						
PVEF_GVTN	PROBABLE E3 PROTEIN	HUMAN PAPILLOMA VIRUS TYPE 59	681-719							
PVENV_BEV	VIRAL ENHANCING FACTOR (VEF) (104 KD GLYCOP	TRICHOPLUSIA NI GRANULOSIS VIRUS (TNGV)	195-229							
PVENV_DHV1	ENVELOPE PROTEIN	BERNE VIRUS (BEV)	318-366							
PVENV_MCV1	ENVELOPE GLYCOPROTEIN PRECURSOR	DHORI VIRUS (STRAIN INDIAN/131261) (DHIO)	232-286							
PVENV_MCV2	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K)	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1 (MCV1)	232-286							
PVENV_THOGV	MAJOR ENVELOPE PROTEIN (43 KD PROTEIN) (P43K)	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2 (MCV2)	313-354							
PVENV_VACCC	ENVELOPE GLYCOPROTEIN PRECURSOR (SURFACE	THOGOTO VIRUS (THO)								

PCGENE	ALLNOTIS	FILENAME	PROTEIN	YIRUS	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
PVGI_SPA4	CAPSID PROTEIN			SPIROPLASMA VIRUS SPV1-R8A2 B	136-170	256-297	320-357					
PVG32_HSVII	CAPSID PROTEIN			SPIROPLASMA VIRUS 4 (SPV4)	287-321							
PVG34_HSVII	HYPOTHETICAL GENE 22 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	117-158	437-629	660-892	899-1055				
PVG36_HSVII	HYPOTHETICAL GENE 24 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	7-72	74-108						
PVG38_HSVII	HYPOTHETICAL GENE 27 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	164-219							
PVG38_HSVII	HYPOTHETICAL GENE 27 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	253-290							
PVG38_ANEPV	HYPOTHETICAL GENE 28 PROTEIN			ANISACTA NOOREI ENTOMOPOXVIRUS (ANEPV)	29-63	184-218						
PVG38_SPVIR	HYPOTHETICAL G2R PROTEIN				222-256	285-326						
PVG2_SPA4	GENE 2 PROTEIN			SPIROPLASMA VIRUS SPV1-R8A2 B	255-310							
PVG31_HSVII	GENE 2 PROTEIN			SPIROPLASMA VIRUS 4 (SPV4)	149-183							
PVG34_HSVII	HYPOTHETICAL GENE 31 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	345-379							
PVG35_HSVII	HYPOTHETICAL GENE 34 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	17-90							
PVG37_HSVII	HYPOTHETICAL GENE 35 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	435-472							
PVG38_HSVII	HYPOTHETICAL GENE 37 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	84-118							
PVG39_HSVII	HYPOTHETICAL GENE 38 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	124-158	266-300						
PVG3_SPVIR	HYPOTHETICAL GENE 39 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	8-49	162-196	203-244					
PVG3_SPA4	GENE 1 PROTEIN			SPIROPLASMA VIRUS SPV1-R8A2 B	6-54	87-121						
PVG43_HSVII	GENE 3 PROTEIN			SPIROPLASMA VIRUS 4 (SPV4)	116-150	262-296	324-361	643-677				
PVG45_HSVSA	HYPOTHETICAL GENE 43 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	121-162							
PVG46_HSVII	HYPOTHETICAL GENE 45 PROTEIN			HERPESVIRUS SAIMIRI (STRAIN 11)	45-86	939-1078	1251-1321					
PVG48_HSVII	PROBABLE MAJOR GLYCOPROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	169-207							
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	360-417	611-666	733-767					
PVG49_HSVSA	HYPOTHETICAL GENE 48 PROTEIN			HERPESVIRUS SAIMIRI (STRAIN 11)	68-102							
PVG4R_ANEPV	HYPOTHETICAL GENE 49 PROTEIN			HERPESVIRUS SAIMIRI (STRAIN 11)	4-38							
PVG4_SPA4	G4R PROTEIN			ANISACTA NOOREI ENTOMOPOXVIRUS (ANEPV)	89-130							
PVG51_HSVII	GENE 4 PROTEIN			SPIROPLASMA VIRUS 4 (SPV4)	34-73	89-123						
PVG51_HSVSA	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	29-70	123-157	162-196					
PVG53_HSVII	GENE 51 GLYCOPROTEIN			HERPESVIRUS SAIMIRI (STRAIN 11)	67-127							
PVG54_HSVII	HYPOTHETICAL GENE 53 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	355-396							
PVG55_HSVII	HYPOTHETICAL GENE 54 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	101-135							
PVG55_HSVSA	HYPOTHETICAL GENE 55 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	126-178							
PVG56_HSVII	HYPOTHETICAL GENE 55 PROTEIN			HERPESVIRUS SAIMIRI (STRAIN 11)	151-192	578-612	644-678	750-784	846-880	1111-1145		
PVG59_HSVII	HYPOTHETICAL GENE 56 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	10-72	89-123						
PVG59_HSVSA	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	169-209							
PVG5_SPVIR	GENE 59 PROTEIN			HERPESVIRUS SAIMIRI (STRAIN 11)	65-103							
PVG61_HSVII	GENE 5 PROTEIN			SPIROPLASMA VIRUS SPV1-R8A2 B	265-299							
PVG63_HSVII	HYPOTHETICAL GENE 61 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	546-584							
PVG63_HSVII	HYPOTHETICAL GENE 61 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	805-839	1213-1254						
PVG66_HSVII	HYPOTHETICAL GENE 63 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	328-410							
PVG67_HSVII	HYPOTHETICAL GENE 65 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	354-188							
PVG67_HSVII	HYPOTHETICAL GENE 66 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	379-413	501-546	1321-1369	1478-1541				
PVG68_HSVII	HYPOTHETICAL GENE 67 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	245-288							
PVG72_HSVII	HYPOTHETICAL GENE 68 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	447-484	723-757	912-949					
PVG75_HSVII	HYPOTHETICAL GENE 72 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	271-305	388-422						
PVG8_SPVIR	HYPOTHETICAL GENE 73 PROTEIN			ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	5-51							
PVG61_IBVB	GENE 8 PROTEIN			SPIROPLASMA VIRUS SPV1-R8A2 B	1233-1267	2119-2156	3388-3424	3475-3513	3517-3556	3761-3795		
PVG3_HSCMVA	F1 PROTEIN			AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (I)	42-179							
PVGL1_CVPR8	GLYCOPROTEIN H301 PRECURSOR			HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	212-257							
PVGL2_CVBFB	E1 GLYCOPROTEIN PRECURSOR (MATRIX GLYCOP			PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / DRI	642-676	850-885	993-1088	1263-1305				
PVGL2_CVBFB	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN F15	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVBLY	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO			BOVINE CORONAVIRUS (STRAIN L9)	642-676	850-885	993-1109	1263-1305				

PCGENE	ALLNOTIS	ALL VIRUSES (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS								
PVGL2_CVH22	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	BOVINE CORONAVIRUS (STRAIN VACCINE)	642-676	850-885	993-1109	1263-1305				
PVGL2_CVH4	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HUMAN CORONAVIRUS (STRAIN 229E)	770-916	1055-1112	1270-1315					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4) (MHV-4)	643-684	1001-1117	1270-1315					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MURINE CORONAVIRUS MHV (STRAIN A39)	591-632	949-1079	1218-1263					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MURINE CORONAVIRUS MHV (STRAIN JH4V / VARIANT CL-2)	643-684	1001-1117	1270-1315					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MURINE CORONAVIRUS MHV (STRAIN JH4V)	503-543	860-976	1129-1174					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	69-110	448-482	692-733	885-923	1040-1186	1352-1389		
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	69-110	448-482	692-733	885-923	1040-1186	1352-1389		
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	70-110	446-480	690-731	887-921	1038-1184	1350-1387		
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	69-110	446-480	690-731	887-921	1038-1184	1350-1387		
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	224-258	468-509	665-699	816-962	1128-1165			
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	224-258	468-509	665-699	816-962	1128-1165			
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	69-110	446-480	690-731	887-921	1038-1184	1350-1387		
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	68-102							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	189-245	451-485	695-736	892-926	1043-1189	1355-1392		
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 682)	791-905	1057-1091						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	437-478	772-904	1056-1090					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	773-905	1057-1091						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN K8323)	437-478	772-904	1056-1090					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	437-478	772-904	1056-1090					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-88	128-162	436-484	844-878				
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	22-88	128-162	437-478	451-485	845-879			
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	828-890							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	827-889							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	828-890							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN PATTON)	828-890							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	828-890							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	828-890							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 5A8)	817-871							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	37-71	185-223						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	BOVINE HERPESVIRUS TYPE 1	859-913							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	BOVINE HERPESVIRUS TYPE 2 (STRAIN BNIV)	440-474	848-902						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	863-900							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HV525A)	542-576	911-961						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	474-515	847-900						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD1)	542-576	911-961						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	542-576	910-960						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MAKES'S DISEASE HERPESVIRUS (STRAIN RB-1B)	390-435	649-683	787-845					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPESVIRUS SAUURI (STRAIN 11)	240-288	406-447						
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / DECKE)	206-260	427-475	693-734	744-778	860-894			
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	92-133	396-630	809-867					
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	442-476							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	443-477							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	235-269							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KEN)	182-218							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MAKES'S DISEASE HERPESVIRUS (STRAIN RB-1B)	63-97							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MAKES'S DISEASE HERPESVIRUS (STRAIN RB-1B)	63-97							
PVGL2_CVH43	E2 GLYCOPROTEIN PRECURSOR (SPIKE GLYCOPRO)	MAKES'S DISEASE HERPESVIRUS (STRAIN GA)	62-96							

PGCENE	ALLNOTIS	ALL Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	62-97							
PVGLC_PXIVF	SECRETORY GLYCOPROTEIN GP170S PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)								
PVGLC_VZVD	GLYCOPROTEIN GIII PRECURSOR	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKE)	103-235							
PVGLC_VZVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUNIAS)	280-321							
PVGLD_HSVEA	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	280-321							
PVGLD_HSVEB	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	89-123							
PVGLD_HSVBK	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P) AND (STRAIN KEN)	139-173							
PVGLD_HSV11	GLYCOPROTEIN D PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	139-173							
PVGLD_HSV2	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	111-145							
PVGLF_BRSVA	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-159							
PVGLF_BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIOTIAL VIRUS (STRAIN A31908)	146-202	504-545						
PVGLF_BRSVR	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIOTIAL VIRUS (STRAIN COPENHAGE)	146-202	267-302	506-547					
PVGLF_CDVO	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIOTIAL VIRUS (STRAIN RB94)	146-202	267-302	506-554					
PVGLF_HRSVI	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSTPOORT)	228-297	340-381	568-602					
PVGLF_HRSVA	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIOTIAL VIRUS (SUBGROUP B / STRAIN A2)	116-202	267-302	506-549					
PVGLF_HRSVL	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIOTIAL VIRUS (STRAIN A2)	116-202	267-302	506-549					
PVGLF_MEASE	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIOTIAL VIRUS (STRAIN RSS-2)	116-202	267-302	506-549					
PVGLF_NEAST	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON) AND (STRAIN HALLE)	116-184	228-269	452-500					
PVGLF_MEASY	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	116-187	228-269	452-500					
PVGLF_MUNIP1	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	116-184	228-269	452-500					
PVGLF_MUNIP2	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	103-179	235-272	447-502				
PVGLF_MUNIP3	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	103-179	235-272	447-502				
PVGLF_MUNIP4	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	103-179	235-272	447-502				
PVGLF_MUNIP5	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	20-54	103-179	235-272	447-502				
PVGLF_NDVA	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	20-54	103-179	235-272	447-502				
PVGLF_NDVB	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/423)	117-182	231-272	426-512					
PVGLF_NDVB3	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45)	122-182	231-272	426-517					
PVGLF_NDVB4	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER03)	117-182	231-272	426-517					
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	122-182	231-272	426-517					
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	131-182	238-272	426-517					
PVGLF_NDVM	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LA5/46)	131-182	231-272	426-517					
PVGLF_NDVQ	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADARA/51)	117-182	231-272	426-512					
PVGLF_NDVG	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	122-182	231-272	433-512					
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	117-182	231-272	426-517					
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B./48)	122-182	231-272	426-517					
PVGLF_PIHHC	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	122-182	231-272	426-512					
PVGLF_P12H	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPER VIRUS	29-63	197-266	309-350	533-581				
PVGLF_P12HG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	123-174	207-267	459-503					
PVGLF_P12HT	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	93-183	477-528						
PVGLF_P12IB	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	93-183	477-528						
PVGLF_P12IB4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	93-185	477-528						
PVGLF_P12IB5	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	117-182	207-241	456-518					
PVGLF_P12IB6	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	117-182	207-241	462-532					
PVGLF_P12IB7	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	112-180	224-265	448-493					
PVGLF_P12IB8	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	112-180	224-265	448-493					
PVGLF_P12IB9	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	127-188	211-271	463-533					
PVGLF_P12IB10	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN FUSHIMI)	127-188	211-271	463-533					
PVGLF_P12IB11	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HARRIS)	127-188	218-271	463-533					
PVGLF_P12IB12	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN HV1)	127-188	211-271	463-533					
PVGLF_P12IB13	FUSION GLYCOPROTEIN PRECURSOR	SENDAI VIRUS (STRAIN Z)	127-188	211-271	463-533					
PVGLF_P12IB14	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	96-186	454-508						
PVGLF_P12IB15	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	103-171	241-275	451-487					
PVGLF_P12IB16	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	105-161	190-224	457-498					

PCGENE	ALLNOTIS	ALLNOTIS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	ALLNOTIS (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVGLG_HRSVC	SPIKE GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	506-612							
PVGLG_HRSV1	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGE)	30-70	104-138						
PVGLG_HRSV2	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN)	30-81							
PVGLG_HRSV3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD642)	30-85							
PVGLG_HRSV4	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD1734)	30-85							
PVGLG_HRSV5	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD5857)	30-107							
PVGLG_HRSV6	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD6156)	30-85							
PVGLG_HRSV7	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RSD6614)	30-85							
PVGLG_HRSV8	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN)	30-81							
PVGLG_HRSV9	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	30-67							
PVGLG_HRSV10	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN)	23-85							
PVGLG_HRSV11	MAJOR SURFACE GLYCOPROTEIN G	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	271-305							
PVGLG_HRSV12	MAJOR SURFACE GLYCOPROTEIN G	SIGNA VIRUS	344-381	464-498						
PVGLG_HRSV13	MAJOR SURFACE GLYCOPROTEIN G	SONCHUS YELLOW NET VIRUS	488-523							
PVGLG_HRSV14	MAJOR SURFACE GLYCOPROTEIN G	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	363-397							
PVGLG_HRSV15	MAJOR SURFACE GLYCOPROTEIN G	VELOCULAR STONATITIS VIRUS (SEROTYPE INDIANA / STRAIN G)	476-510							
PVGLG_HRSV16	MAJOR SURFACE GLYCOPROTEIN G	EPSTEIN-BARR VIRUS (STRAIN B95-8)	53-87	160-201	336-380	653-694				
PVGLG_HRSV17	MAJOR SURFACE GLYCOPROTEIN G	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	103-137	270-311	693-741					
PVGLG_HRSV18	MAJOR SURFACE GLYCOPROTEIN G	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	102-136	692-740						
PVGLG_HRSV19	MAJOR SURFACE GLYCOPROTEIN G	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	447-481							
PVGLG_HRSV20	MAJOR SURFACE GLYCOPROTEIN G	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HENI)	447-481							
PVGLG_HRSV21	MAJOR SURFACE GLYCOPROTEIN G	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN G5)	337-406							
PVGLG_HRSV22	MAJOR SURFACE GLYCOPROTEIN G	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	364-416							
PVGLG_HRSV23	MAJOR SURFACE GLYCOPROTEIN G	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	334-379	414-455						
PVGLG_HRSV24	MAJOR SURFACE GLYCOPROTEIN G	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HV)	327-372	407-448						
PVGLG_HRSV25	MAJOR SURFACE GLYCOPROTEIN G	HERPESVIRUS SAIMIRI (STRAIN 11)	32-66	374-453	664-712					
PVGLG_HRSV26	MAJOR SURFACE GLYCOPROTEIN G	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	440-474							
PVGLG_HRSV27	MAJOR SURFACE GLYCOPROTEIN G	PSUDORABIES VIRUS (STRAIN KAPLAN)	226-260							
PVGLG_HRSV28	MAJOR SURFACE GLYCOPROTEIN G	PSUDORABIES VIRUS (STRAIN NIA-3)	226-260							
PVGLG_HRSV29	MAJOR SURFACE GLYCOPROTEIN G	PSUDORABIES VIRUS (STRAIN RICE)	226-260							
PVGLG_HRSV30	MAJOR SURFACE GLYCOPROTEIN G	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	455-506							
PVGLG_HRSV31	MAJOR SURFACE GLYCOPROTEIN G	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-111	323-359						
PVGLG_HRSV32	MAJOR SURFACE GLYCOPROTEIN G	BUNYA VIRUS GERMISTON	512-567	685-737	1228-1262					
PVGLG_HRSV33	MAJOR SURFACE GLYCOPROTEIN G	BUNYA VIRUS LA CROSSE (ISOLATE L74)	643-677	916-950						
PVGLG_HRSV34	MAJOR SURFACE GLYCOPROTEIN G	BUNYA VIRUS SNOWSHOE HARE	643-677							
PVGLG_HRSV35	MAJOR SURFACE GLYCOPROTEIN G	DUGBE VIRUS	340-374	504-563	905-939					
PVGLG_HRSV36	MAJOR SURFACE GLYCOPROTEIN G	HANTAAN VIRUS (STRAIN B-1)	937-989	1238-1300						
PVGLG_HRSV37	MAJOR SURFACE GLYCOPROTEIN G	HANTAAN VIRUS (STRAIN HOJO)	693-727							
PVGLG_HRSV38	MAJOR SURFACE GLYCOPROTEIN G	HANTAAN VIRUS (STRAIN LEE)	72-106							
PVGLG_HRSV39	MAJOR SURFACE GLYCOPROTEIN G	HANTAAN VIRUS (STRAIN 76-118)	72-106							
PVGLG_HRSV40	MAJOR SURFACE GLYCOPROTEIN G	IMPATIENS NECROTIC SPOT VIRUS	1067-1101							
PVGLG_HRSV41	MAJOR SURFACE GLYCOPROTEIN G	PROSPECT HILL VIRUS	73-111							
PVGLG_HRSV42	MAJOR SURFACE GLYCOPROTEIN G	PUNTA TORO PHLEBOVIRUS	149-251							
PVGLG_HRSV43	MAJOR SURFACE GLYCOPROTEIN G	SEUL VIRUS (STRAIN 80-39)	693-727							
PVGLG_HRSV44	MAJOR SURFACE GLYCOPROTEIN G	SEUL VIRUS (STRAIN R22)	694-728							
PVGLG_HRSV45	MAJOR SURFACE GLYCOPROTEIN G	SEUL VIRUS (STRAIN SR-11)	693-730							
PVGLG_HRSV46	MAJOR SURFACE GLYCOPROTEIN G	BOVINE EPHEMERAL FEVER VIRUS	377-414	513-569						
PVGLG_HRSV47	MAJOR SURFACE GLYCOPROTEIN G	BERNE VIRUS	43-82	90-124	622-656	1128-1236				
PVGLG_HRSV48	MAJOR SURFACE GLYCOPROTEIN G	PSUDORABIES VIRUS (STRAIN RICE)	420-461							
PVGLG_HRSV49	MAJOR SURFACE GLYCOPROTEIN G	JUNIN ARENAVIRUS	301-349							

PCGNE	ALLNOTIS	ALL Virens (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVGLY_LASSI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	317-360	388-422						
PVGLY_LYCVB	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN JOSIAH)	318-361	389-423						
PVGLY_LYCVW	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCTIC CHORIONMENINGITIS VIRUS (STRAIN ARMSTRON)	333-367	395-432						
PVGLY_MDEI	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LYMPHOCTIC CHORIONMENINGITIS VIRUS (STRAIN WE)	124-158	333-367	395-432					
PVGLY_PIARV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOEIA VIRUS	316-359							
PVGLY_TACV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	334-375							
PVGLY_TACV3	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	315-363							
PVGLY_TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	303-351	382-416						
PVGLY_TACVT	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	302-350	381-415						
PVGNB_CPNV	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	303-351	382-416						
PVGNM_CPNV	GENOME POLYPROTEIN B	COWPEA MOSAIC VIRUS	835-869							
PVGNM_CPSNV	GENOME POLYPROTEIN M	COWPEA MOSAIC VIRUS	160-201							
PVGNM_RCMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-226	758-792	874-915					
PVGP8_EBV	GENOME POLYPROTEIN M	RED CLOVER MOTTLE VIRUS	837-871	912-946						
PVGP_EBOV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	94-149							
PVGP_MABV1	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	280-321	334-368	469-503					
PVGP_MABV7	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN MUSOKE)	562-596							
PVH02_VACCC	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	562-596							
PVH02_VACCV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN COPENHAGEN)	58-92							
PVH02_VARV	LATE PROTEIN H2	VACCINIA VIRUS (STRAIN WR)	58-94							
PVH05_VACCC	PROTEIN H5	VARIOLA VIRUS	58-92							
PVH05_VACCV	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	118-185							
PVH05_VARV	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	118-185							
PVHEL_LSV	PROBABLE HELICASE	VARIOLA VIRUS	136-203							
PVHRP_VACCC	HOST RANGE PROTEIN	LILY SYMPTOMLESS VIRUS	126-160							
PVHRP_VACCV	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	216-279							
PV103_VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	150-193	210-244						
PV103_VARV	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	150-193	210-244						
PV106_VACCC	PROTEIN I6	VARIOLA VIRUS	58-92							
PV106_VARV	PROTEIN I6	VACCINIA VIRUS (STRAIN WR)	58-92							
PV107_VARV	PROTEIN I7	VARIOLA VIRUS	58-92							
PV108_VACCC	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	373-407							
PV108_VACCV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	548-589							
PV108_VARV	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	548-589							
PV1E1_HCMVA	55 KD IMMEDIATE-EARLY PROTEIN I	VARIOLA VIRUS	548-589							
PV1E1_HCMVT	55 KD IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN ADI69)	78-112	171-205	368-402	416-450				
PV1E2_NPVP	IMMEDIATE-EARLY PROTEIN I	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	78-112	171-205	368-402	416-450				
PV1E2_NPVAC	IMMEDIATE-EARLY PROTEIN IE-2	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	244-297							
PV1E2_CAEVC	IMMEDIATE-EARLY REGULATORY PROTEIN IE-N	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYTHEDROSIS VIRUS	305-395							
PV1F_FIVP	VIRION INFECTIVITY FACTOR	AUTOGRAPIA CALIFORNICA NUCLEAR POLYTHEDROSIS VIRUS	271-407							
PV1F_FIVD	VIRION INFECTIVITY FACTOR	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	23-92							
PV1F_HV1A2	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	53-94							
PV1F_HV1B1	VIRION INFECTIVITY FACTOR	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	32-80							
PV1F_HV1B5	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	1-42	62-96						
PV1F_HV1E1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 BRU HXB2.PV)	1-42	62-96						
PV1F_HV1J1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	1-42	62-96						
PV1F_HV1J2	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	1-42	62-96						
PV1F_HV1M1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRC5F ISOLATE)	1-42	62-96						
PV1F_HV1M3	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	2-36							
PV1F_HV1N1	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	1-42	62-96						
PV1F_HV1N3	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-3 ISOL)	1-42	62-96						

PGENE	ALLIOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVIF_HVIND	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ISOLATE NIT-A)	1-42	62-96						
PVIF_HVIOY	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	1-42	62-96						
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OVI ISOLATE)	1-42	62-96						
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RFLAT ISOLATE)	1-42	62-96						
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN)	1-42	62-96						
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	1-42	62-96						
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	147-195							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NII-2)	152-193							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	163-197							
PVIF_HVIRH	VIRION INFECTION FACTOR	OVINE LENTIVIRUS (STRAIN SA-ONVY)	44-114							
PVIF_HVIRH	VIRION INFECTION FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGNII 55 ISOLATE)	2-58	150-202						
PVIF_HVIRH	VIRION INFECTION FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (AGNII 55 ISOLATE)	17-58							
PVIF_HVIRH	VIRION INFECTION FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (CLONE CR1 2-36)	143-187							
PVIF_HVIRH	VIRION INFECTION FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	20-58	150-195						
PVIF_HVIRH	VIRION INFECTION FACTOR	CHIMPANZEE IMMUNODEFICIENCY VIRUS	1-42							
PVIF_HVIRH	VIRION INFECTION FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	1-39							
PVIF_HVIRH	VIRION INFECTION FACTOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	85-134							
PVIF_HVIRH	VIRION INFECTION FACTOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	148-182	335-369						
PVIF_HVIRH	VIRION INFECTION FACTOR	HERPES VIRUS SAIMIRI (STRAIN 11)	80-129							
PVIF_HVIRH	VIRION INFECTION FACTOR	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-151	155-189	267-301					
PVIF_HVIRH	VIRION INFECTION FACTOR	SULFOLOBUS VIRUS-LIKE PARTICLE SSVI	85-130	138-172						
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56							
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN WR)	22-56							
PVIF_HVIRH	VIRION INFECTION FACTOR	VARIOLA VIRUS	22-56							
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-82							
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN WR)	38-82							
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN WR, AND (STRAIN COPENHAGEN)	115-149							
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-81							
PVIF_HVIRH	VIRION INFECTION FACTOR	VACCINIA VIRUS (STRAIN WR)	47-92							
PVIF_HVIRH	VIRION INFECTION FACTOR	VARIOLA VIRUS	47-81							
PVIF_HVIRH	VIRION INFECTION FACTOR	COTTONTAIL RABBIT (SHOE) PAPILLOMA VIRUS (STRAIN KANS)	261-295	331-383						
PVIF_HVIRH	VIRION INFECTION FACTOR	AVIAN PAPILLOMA VIRUS FPV-L	38-90							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 5	355-393							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 8	354-392							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 1A	345-379							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 47	353-391							
PVIF_HVIRH	VIRION INFECTION FACTOR	DEER PAPILLOMA VIRUS	23-57							
PVIF_HVIRH	VIRION INFECTION FACTOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	94-142	437-471						
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 8	341-375							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 16	354-392							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 1A	295-333							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 31	345-379							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 35	288-326							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 47	292-333							
PVIF_HVIRH	VIRION INFECTION FACTOR	HUMAN PAPILLOMA VIRUS TYPE 58	341-375							
PVIF_HVIRH	VIRION INFECTION FACTOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	107-148	1112-1178						
PVIF_HVIRH	VIRION INFECTION FACTOR	REOVIRUS (TYPE 2 / STRAIN DS/ONES)	1112-1178							
PVIF_HVIRH	VIRION INFECTION FACTOR	REOVIRUS (TYPE 1 / STRAIN LANG)	107-148	331-365	1112-1178					
PVIF_HVIRH	VIRION INFECTION FACTOR	TIPULA IRIDESCENT VIRUS	146-180	198-226						

PGCENE	ALLNOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
ELIENAM	PROTEIN	YIRUS	5-56							
PVNI1_REOVL	PROTEIN M1	VACCINIA VIRUS (STRAIN COHENHAGEN)	5-56							
PVNI21_REOVD	MINOR VIRION STRUCTURAL PROTEIN NU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	287-321							
PVNI22_REOVD	MAJOR VIRION STRUCTURAL PROTEIN NU-1/AMU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-430	619-663						
PVNI2_REOVI	MAJOR VIRION STRUCTURAL PROTEIN NU-1/AMU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	416-430	618-662						
PVNI2_REOVL	MAJOR VIRION STRUCTURAL PROTEIN NU-1/AMU-1C	REOVIRUS (TYPE 2 / STRAIN D3/ONES)	416-430	618-662						
PVNI3_REOVD	MAJOR VIRION STRUCTURAL PROTEIN NU-1/AMU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	416-430	618-662						
PVNI21_REOVD	MAJOR NONSTRUCTURAL PROTEIN NU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	135-190	337-371	522-558	618-690				
PVNI21_BRSDA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	42-90							
PVNI21_HRSVA	MATRIX GLYCOPROTEIN M2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	42-90							
PVNI21_TRTV	MATRIX GLYCOPROTEIN M2	TURKEY RHINOTRACHEITIS VIRUS	36-70							
PVNIAT_CDVO	MATRIX GLYCOPROTEIN M2	TURKEY RHINOTRACHEITIS VIRUS	36-70							
PVNIAT_INCIJ	MATRIX PROTEIN	CANINE DISTEMPER VIRUS (STRAIN UNDERSTEEPOORT)	193-234							
PVNIAT_NDVA	MATRIX (M) PROTEIN	INFLUENZA C VIRUS (STRAIN C/1950)	73-114	151-208						
PVNIAT_NDVB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/22)	310-338							
PVNIAT_P13B	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	324-358							
PVNIAT_P13B4	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	99-133	204-252						
PVNIAT_RABVA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NHI 47885)	99-133	204-252						
PVNIAT_RABVC	MATRIX PROTEIN	RABIES VIRUS (STRAIN AVOI)	69-103							
PVNIAT_RABVE	MATRIX PROTEIN	RABIES VIRUS (STRAIN CVS-11)	69-103							
PVNIAT_RABVN	MATRIX PROTEIN	RABIES VIRUS (STRAIN ERA)	69-103							
PVNIAT_RABVP	MATRIX PROTEIN	RABIES VIRUS (STRAIN NISHIGAHARA RCEH)	69-103							
PVNIAT_RABVS	MATRIX PROTEIN	RABIES VIRUS (STRAIN PV)	69-103							
PVNIAT_SYNV	MATRIX PROTEIN	RABIES VIRUS (STRAIN SAD B19)	69-103							
PVNIAT_VSVIG	MATRIX PROTEIN	SONCHUS YELLOW NET VIRUS	246-280							
PVNIAT_VSVIM	MATRIX PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN G198-232)	175-209							
PVNIAT_CVPSF	EI GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN NEBUS)	98-146	212-257						
PVNIAT_CVPPU	EI GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	212-257							
PVNIAT_CVPRM	EI GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	212-257							
PVNIAT_CVTKC	EI GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	212-257							
PVNIAT_FIPV	EI GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	28-62	175-209						
PVNIAT_IBV6	EI GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	212-257							
PVNIAT_IBVB	EI GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 682)	21-55	177-218						
PVNIAT_IBVB2	EI GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-55	177-218						
PVNIAT_IBVK	EI GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE M421-55)	177-218							
PVNIAT_EBV	EI GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8323)	177-218							
PVNIAT_CANVC	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	36-94							
PVNIAT_CANVD	MOVEMENT PROTEIN	CALIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	187-254	270-324						
PVNIAT_CANVE	MOVEMENT PROTEIN	CALIFLOWER MOSAIC VIRUS (STRAIN D/H)	187-254	270-324						
PVNIAT_CANVN	MOVEMENT PROTEIN	CALIFLOWER MOSAIC VIRUS (STRAIN BBC)	187-254	270-324						
PVNIAT_CANVS	MOVEMENT PROTEIN	CALIFLOWER MOSAIC VIRUS (STRAIN NY8153)	187-254	270-324						
PVNIAT_CANVW	MOVEMENT PROTEIN	CALIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	187-254	270-324						
PVNIAT_CERV	MOVEMENT PROTEIN	CALIFLOWER MOSAIC VIRUS (STRAIN W260)	187-254	270-324						
PVNIAT_FMYD	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	212-246							
PVNIAT_SOCKV	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	217-251							
PVNIAT_IPBDB	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	76-118							
PVNIAT_IPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S)	272-313	324-361						
PVNIAT_IPBDU	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	271-312	323-360						
PVNIAT_IPBDW	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	214-275	289-323						
PVNIAT_IPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S3)	272-313	324-361						
PVNIAT_IPBHS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	210-244							
PVNIAT_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328							
PVNIAT_WHV59	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	208-242							
PVNIAT_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	213-247							

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILE NAME	PROTEIN	VIRUS								
PVNS2_IATFOW	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AFORT MONNOUTI/147)	14-93							
PVNS2_IATPR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AFORT WARREN/150)	14-93							
PVNS2_IJLE2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AFOWL PLAGUE VIRUS/ROSTOCK)	14-93							
PVNS2_IJLEN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ALENINGRAD/134/1757)	14-93							
PVNS2_IJMA6	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ALENINGRAD/54/1)	14-93							
PVNS2_IJMA8	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AMALLARD/ALBERT/8876)	14-79							
PVNS2_IJMAN	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AMALLARD/ALBERT/82778)	14-79							
PVNS2_IJMAO	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AMALLARD/NEW YORK/6750/78)	14-93							
PVNS2_IJANV	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AMALLARD/NEW YORK/6874/78)	14-93							
PVNS2_IJAP1	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN AMYNAH/IANEDA-THAI/76)	11-90							
PVNS2_IJAP2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERT/11979)	14-93							
PVNS2_IJAP3	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERT/121779)	14-79							
PVNS2_IJAP4	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERT/26878)	14-93							
PVNS2_IJATK	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN APUEBTO RICO/834)	14-93							
PVNS2_IJATR	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ATTURKEY/BETHLEHEM-GLILIT/14)	14-79							
PVNS2_IJATS	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ATTURKEY/YOBECON/71)	11-52							
PVNS2_IJAU5	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ATERNS/SOUTH AFRICA/61)	14-93							
PVNS2_IJBLE	NONSTRUCTURAL PROTEIN NS2	INFLUENZA A VIRUS (STRAIN ATERNS/9077)	14-93							
PVNS2_IJBYA	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN BLEE/40)	2-43	59-119						
PVNS2_IJCIJ	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN BYAMAGATA/1/71)	2-43	59-119						
PVNS2_IJPM	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN CII/50)	57-98							
PVNS2_IJH5V3	NONSTRUCTURAL PROTEIN 2	PNEUMONIA VIRUS OF MICE	70-104							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 3)	44-78	166-215						
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS3	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 9)	37-78	88-122	166-215					
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS3	BROADHAVEN VIRUS	26-98	102-147						
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS3	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (S)	13-51							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS4	HUMAN CORONAVIRUS (STRAIN 229E)	11-52							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS4	RICE STRIPE VIRUS	2-40							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	11-47							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN 7	FELINE ENTERIC CORONAVIRUS (STRAIN 79-1683)	1-42							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN 7	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	1-42							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	CANINE DISTEMPER VIRUS (STRAIN UNDERSTEP/007)	50-84	95-152						
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN EDMONSTON)	43-84							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN IP-3-CA)	43-84							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	MEASLES VIRUS (STRAIN YAMAGATA-1)	43-84							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C3)	133-167							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	133-167							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-5/71)	133-167							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14/83)	40-75	133-167						
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-133	161-199						
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	SENDAL VIRUS (STRAIN 694)	133-167							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	SENDAL VIRUS (STRAIN HARRIS)	133-167							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN C	SENDAL VIRUS (STRAIN Z)	133-167							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-1	IMPATIENS NECROTIC SPOT VIRUS (INSV)	44-102	262-296						
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	BUNYA VIRUS GERMISTON	34-75							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	BUNYA VIRUS LA CROSSE (ISOLATE L74)	5-39							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	BUNYA VIRUS LA CROSSE	5-39							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	MAGUARI VIRUS	35-69							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	TOSCANA VIRUS (TOS)	144-183							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	LUKINEMI VIRUS (LUK)	138-173							
PVNS2_IJH5V9	NONSTRUCTURAL PROTEIN NS-5	PSEUDORABIES VIRUS (STRAIN KAPLAN) (PRV)	1134-1175							
PVNS2_IJH5V9	PROBABLE NUCLEAR ANTIGEN	DHORI VIRUS (STRAIN INDIAN/1313/61) (DHO)	209-243							
PVNS2_IJH5V9	NUCLEOPROTEIN									

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS	191-225	329-369						
PVNUC_IAMNA	NUCLEOPROTEIN	EBOLA VIRUS								
PVNUC_IAMNN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANAS ACUT/APRIMORIE/69/76)	1-42	96-154	329-369					
PVNUC_IABRA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ANN ARBOR/6/60)	1-42	357-408	357-408					
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BRAZIL/11/78)	1-42	357-408						
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/BUDDERGER/AR/HOKKAIDO/1/77)	1-42	96-154	357-408					
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CALIFORNIA/10/78)	1-42	357-409						
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/GERMANY/9/69)	1-42	96-154	357-408					
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/CHICKEN/PENNSYLVANIA/1/83)	1-42	96-154	357-408					
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ALABAMA/1/79)	1-42	96-154	357-408					
PVNUC_IADCC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/BEIJING/1/78)	1-42	96-154	357-408					
PVNUC_IADDE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/CZECHOSLOVAKIA/56)	1-42	96-154	360-408					
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/ENGLAND/1/62)	1-42	96-154	357-408					
PVNUC_IADN2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	1-42	96-154	357-408					
PVNUC_IADN3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/HONG KONG/7/75)	1-42	96-154	357-408					
PVNUC_IADN4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/INDONESIA/1/53)	1-42	96-154	357-408					
PVNUC_IADN5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/NEW ZEALAND/3/76)	1-42	96-154	357-408					
PVNUC_IADN6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/DUCK/UKRAINE/2/60)	96-154	357-408						
PVNUC_IADN7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/ENGLAND/1955)	1-42	357-409						
PVNUC_IADN8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT MONMOUTH/1/47)	1-42	357-409						
PVNUC_IADN9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FORT WARREN/1/50)	357-408							
PVNUC_IADN10	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/DOBSON/1-42)	96-154	357-408						
PVNUC_IADN11	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/FOWL PLAGUE VIRUS/ROSTOCK/1-42)	96-154	360-408						
PVNUC_IADN12	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GREY TEAL/AUSTRALIA/2/79)	1-42	113-134	357-408					
PVNUC_IADN13	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ARYLAND/3/77)	1-42	357-408						
PVNUC_IADN14	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ARYLAND/704/77)	96-154	357-409						
PVNUC_IADN15	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ARYLAND/1834/78)	1-42	96-154	357-409					
PVNUC_IADN16	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ARYLAND/1815/79)	1-42	96-154	357-409					
PVNUC_IADN17	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/ASTRAKHAN/22/84)	1-42	96-154	357-409					
PVNUC_IADN18	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MASSACHUSETTS/52/80)	1-42	96-154	357-409					
PVNUC_IADN19	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/GULL/MINNESOTA/945/80)	1-42	96-154	357-409					
PVNUC_IADN20	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HICKORY/40)	1-42	357-409						
PVNUC_IADN21	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/JILLIN/1/89)	1-42	96-154	357-408					
PVNUC_IADN22	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/LONDON/1/41/673)	1-42	96-154	357-408					
PVNUC_IADN23	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/MIA/1/63)	1-42	96-154						
PVNUC_IADN24	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/1/68)	1-42	357-409						
PVNUC_IADN25	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/HONG KONG/5/83)	1-42	357-409						
PVNUC_IADN26	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAGUE/1/56)	96-154	357-408						
PVNUC_IADN27	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-154	357-408					
PVNUC_IADN28	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/KIEV/59/79)	1-42	357-409						
PVNUC_IADN29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	1-42	357-409						
PVNUC_IADN30	NUCLEOPROTEIN	INFLUENZA A VIRUS	1-42	96-154	357-408					
PVNUC_IADN31	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MALLARD NEW YORK/6750/78)	1-42	96-154	357-408					
PVNUC_IADN32	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	1-42	96-154	357-408					
PVNUC_IADN33	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NEW JERSEY/87/6)	1-42	96-154	357-408					
PVNUC_IADN34	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	1-42	357-409						
PVNUC_IADN35	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/OHIO/4/83)	1-42	357-409						
PVNUC_IADN36	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PARROT/ULSTER/73)	1-42	96-154	357-408					
PVNUC_IADN37	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/83/4)	1-42	357-409						
PVNUC_IADN38	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/RUDY TURNSTONE/NEW JERSEY/1-42)	96-154	357-408						
PVNUC_IADN39	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SEAL/MASSACHUSETTS/1/80)	1-42	96-154	357-408					
PVNUC_IADN40	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/77)	1-42	357-408						

PGENE	ALLIOTIS	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV01_1	165 KD PROTEIN	POTATO VIRUS X (STRAIN CP) (PVX)	510-547							
PV01_2	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS (SMYVE)	308-342	931-965						
PV01_3	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN N) (WCMV)	1240-1289							
PV01_4	147 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	1240-1289							
PV01_5	P10 PROTEIN	AUTOGRAFIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (7-41)								
PV01_6	P10 PROTEIN	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (7-50)								
PV01_7	P10 PROTEIN	RICE BLACK STREAKED DWARF VIRUS (RBSDV)	339-382	395-429	506-556					
PV01_8	P10 PROTEIN	RICE GALL DWARF VIRUS (RGDV)	186-233							
PV01_9	P10 PROTEIN	WOUND TUNOR VIRUS (WTV)	220-254							
PV01_10	P10 PROTEIN	RICE DWARF VIRUS (RDV)	25-80	273-314						
PV01_11	P10 PROTEIN	WOUND TUNOR VIRUS (WTV)	16-74							
PV01_12	P10 PROTEIN	RICE DWARF VIRUS (RDV)	140-181							
PV01_13	P10 PROTEIN	WOUND TUNOR VIRUS (WTV)	68-108							
PV01_14	P10 PROTEIN	WOUND TUNOR VIRUS (WTV)	68-108							
PV01_15	P10 PROTEIN	WOUND TUNOR VIRUS (WTV)	189-231							
PV01_16	P10 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	41-82	146-180						
PV01_17	P10 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	47-81							
PV01_18	P10 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	166-200							
PV01_19	P10 PROTEIN	EBOLA VIRUS	36-77							
PV01_20	P10 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	41-78							
PV01_21	P10 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	118-159							
PV01_22	P10 PROTEIN	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (VZV)	47-81							
PV01_23	P10 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUNIAS) (VZV)	136-188	270-304	410-465	614-662	684-720	976-1056		
PV01_24	P10 PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC1)	168-225							
PV01_25	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	77-111	559-593						
PV01_26	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	77-111							
PV01_27	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	77-111	168-209						
PV01_28	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-153	576-610	668-702					
PV01_29	P10 PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV)	72-106	247-301	405-453	461-495	895-929			
PV01_30	P10 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	2-94	482-516	523-557	607-655	675-754			
PV01_31	P10 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	2-94	483-517	524-558	608-656	676-755			
PV01_32	P10 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	17-97	492-526	533-567	617-658	685-764			
PV01_33	P10 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	1-50	52-99	194-228	515-551	599-643	705-746		
PV01_34	P10 PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96	483-517	608-656					
PV01_35	P10 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN E-15) (ASFV)	29-89							
PV01_36	P10 PROTEIN	FROG VIRUS 3 (FV3)	227-261							
PV01_37	P10 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	29-89							
PV01_38	P10 PROTEIN	EBOLA VIRUS	80-119							
PV01_39	P10 PROTEIN	AUTOGRAFIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (34-102)	34-102	224-258						
PV01_40	P10 PROTEIN	BONBYX NODI NUCLEAR POLYHEDROSIS VIRUS (BNPNV)	34-102							
PV01_41	P10 PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	140-181							
PV01_42	P10 PROTEIN	VACCINIA VIRUS (STRAIN L-1VP)	17-51							
PV01_43	P10 PROTEIN	VACCINIA VIRUS (STRAIN WR)	140-181							
PV01_44	P10 PROTEIN	VARIOLA VIRUS	141-182							
PV01_45	P10 PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC1)	173-214	240-274	667-704					
PV01_46	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-255	853-894						
PV01_47	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-255	853-894						
PV01_48	P10 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	214-255	853-894						
PV01_49	P10 PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV)	208-246	798-832	851-892					
PV01_50	P10 PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS	208-246	735-770	798-832	851-892				
PV01_51	P10 PROTEIN	GRAPEVINE FAHLEAF VIRUS (GFLV)	96-133							
PV01_52	P10 PROTEIN	RICE DWARF VIRUS (RDV)	299-337	817-872						
PV01_53	P10 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	24-58	279-263	329-395	406-446	640-688			

PCG/GENE	ALL NOTIS	FILE NAME	ALL VIRESES (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PV140_EBV	PROTEIN	INNER CORE PROTEIN VP3	YINUS	26-76	244-278	331-365	451-492	667-696			
PV140_HSV1	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	433-467							
PV140_HSV2	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)		206-237	599-633						
PV140_ILTV	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EQU-1)		180-245							
PV140_SCMVC	CAPSID PROTEIN P40	INFECTIOUS LARYNGITIS VIRUS (STRAIN THORNE V88)		1-35	509-557						
PV140_VZVD	CAPSID PROTEIN P40	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)		457-498							
PV141_NPVAC	CAPSID PROTEIN P40	VARIICELLA-ZOSTER VIRUS (STRAIN DUNIAS) (VZV)		167-246	486-522						
PV141_ROT51	STRUCTURAL GLYCOPROTEIN GP41	AUTOCORPUS CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (132-166)		1-35	484-518	528-630					
PV142_ROT51	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)		1-35	237-518	531-646					
PV144_VACCC	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)		335-359	718-763	794-828	857-891				
PV144_VACCV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)		262-296	355-359	718-763	794-828	857-891			
PV14B_VARV	MAJOR CORE PROTEIN P4A PRECURSOR	VACCINIA VIRUS (STRAIN WR)		335-389	719-764	795-829	858-892				
PV14B_FOWPV	MAJOR CORE PROTEIN P4A PRECURSOR	VARIOLA VIRUS		131-172	296-330						
PV14B_VACCC	MAJOR CORE PROTEIN P4B PRECURSOR	FOWLPOX VIRUS		3-37	125-163	249-283					
PV14B_VACCV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)		3-37	125-163	249-283					
PV14B_VARV	MAJOR CORE PROTEIN P4B PRECURSOR	VACCINIA VIRUS (STRAIN WR)		3-37	125-163	249-283					
PV14B_BTIV0	MAJOR CORE PROTEIN P4B PRECURSOR	VARIOLA VIRUS		579-617	619-653						
PV14_BTIV1	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)		569-607	609-643						
PV14_BTIV3	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)		569-607	609-643						
PV14_BTIV2A	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)		569-607	609-643						
PV14_NCDV	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)		569-607	609-643						
PV14_RDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)		484-518	528-630						
PV14_ROT84	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS (RDV)		388-437	444-478	627-679					
PV14_ROT8C	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)		1-35	112-146	338-379	484-518	528-653			
PV14_ROT8U	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)		1-35	484-518	528-630					
PV14_ROT8H	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)		1-35	112-146	338-379	484-518	528-653			
PV14_ROT8I	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)		1-35	112-146	227-274	345-379	484-518	528-653		
PV14_ROT8J	OUTER CAPSID PROTEIN VP4	ROTA VIRUS (GROUP B / STRAIN IDIR)		117-151	476-519						
PV14_ROT8K	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)		1-35	236-273	337-378	483-517	500-645			
PV14_ROT8L	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)		1-35	236-273	337-378	483-517	527-652			
PV14_ROT8M	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)		1-35	112-146	227-274	338-379	484-518	531-646		
PV14_ROT8N	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN D51)		1-35	236-273	337-378	483-517	527-652			
PV14_ROT8O	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN K8)		1-35	237-274	345-379	484-518	528-588			
PV14_ROT8P	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)		1-35	337-378	483-517	527-652				
PV14_ROT8Q	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)		1-35	236-273	337-378	483-517	527-652			
PV14_ROT8R	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)		1-35	337-378	483-517	530-645				
PV14_ROT8S	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)		1-35	237-274	338-379	484-518	531-645			
PV14_ROT8T	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)		1-35	236-273	337-378	483-517	527-652			
PV14_ROT8U	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RRV)		1-38	91-146	227-274					
PV14_ROT8V	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)		1-35	236-273	337-378	483-517	530-644			
PV14_ROT8W	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN VA70)		1-35	237-273	344-378	483-517	527-652			
PV14_ROT8X	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)		1-35	237-273	344-378	483-517	527-652			
PV14_ROT8Y	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)		112-146	484-518	528-629					
PV14_ROT8Z	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)		6-40	127-161	241-278	293-334	580-614			
PV14_ROT9C	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)		1-35	236-273	337-378	483-517	530-664			
PV14_ROT9G	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GOTTFRIED)		1-35	236-273	337-378	483-517	527-652			
PV14_ROT9P	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)		1-35	112-146	237-274	338-379	484-522			
PV14_ROT9H	OUTER CAPSID PROTEIN VP4	RUESUS ROTAVIRUS		1-38	484-518	528-630					
PV14_ROT9F	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEN1)		1-35	237-274	345-379	484-518	531-646			
PV14_ROT9S	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEN1)		1-35	237-274	345-379	484-518	531-646			
PV14_AHSV4	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS (WT)		28-62	565-621						
PV15_BRD	OUTER CAPSID PROTEIN VP5	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACC1)		113-229							
PV15_BTIV10	OUTER CAPSID PROTEIN VP5	BROADHAVEN VIRUS (BRD)		45-86	98-226						

PGENE	ALLNOTES	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVP5_BTIV1	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	14-58	92-150	154-222	404-438				
PVP5_BTIV3	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	14-58	92-150	154-222	404-445				
PVP5_BTIV5	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	14-58	154-222	404-438					
PVP5_BTIV5	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	14-58	92-143	148-222	404-438				
PVP5_BTIV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-58	92-143	148-222	404-438				
PVP5_BTIV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	14-58	92-222	404-438					
PVP5_BHDV1	OUTER CAPSID PROTEIN VP5	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV)	24-58	92-126	163-233	291-325	359-413			
PVP5_RDV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS (RDV)	38-86	95-136	550-594					
PVP5_WTV	OUTER COAT PROTEIN P5	WOUND TUMOR VIRUS (WTV)	414-503	547-581	751-798					
PVP61_MRDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	161-215							
PVP61_NPVAC	PROBABLE NONSTRUCTURAL 41.0 KD PROTEIN	MAIZE ROUGH DWARF VIRUS (MRDV)								
PVP62_BTIV10	61 KD PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS ()	29-96	351-386						
PVP64_NPVOP	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	47-88	159-207	214-251					
PVP67_NPVAC	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS ()	296-361	431-479						
PVP67_NPVGM	MAJOR ENVELOPE GLYCOPROTEIN PRECURSOR	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS ()	44-78	289-364	443-477					
PVP6_BTIV1	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA NELLONELLA NUCLEAR POLYHEDROSIS VIRUS (GNV)	206-281							
PVP6_BTIV3	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	159-211							
PVP6_BTIV7	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	159-211							
PVP6_BTIV5	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	68-102	159-211						
PVP6_BTIV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	12-78	163-211						
PVP6_RDV	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	44-78	135-187						
PVP6_WTV	STRUCTURAL PROTEIN P6	RICE DWARF VIRUS (RDV)	150-191	296-344	360-401					
PVP6_WTVN1	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (WTV)	144-178	286-334	400-434					
PVP74_NPVAC	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	144-178	286-334						
PVP74_NPVCF	P74 PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS ()	387-456							
PVP75_HSVSA	P74 PROTEIN	CHORISTONEURA FUNIFERANA NUCLEAR POLYHEDROSIS VIRUS ()	385-453							
PVP79_NPVAC	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	50-99	163-211	931-984					
PVP7_BTIV10	79 KD PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS ()	44-78	363-397	406-440					
PVP7_BTIV3	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA) (SEROTYPE 10 / ISOLATE USA)	184-228							
PVP7_BTIV7	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	201-235							
PVP7_BTIV5	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE AUSTRALIA)	184-228							
PVP7_BTIV5	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	184-235							
PVP7_BTIV2A	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	184-228							
PVP7_BHDV1	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	184-228							
PVP7_RDV	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1) (EHDV)	16-50	134-178						
PVP7_WTV	VP7 CORE PROTEIN	RICE DWARF VIRUS (RDV)	47-95	172-235						
PVP80_NPVAC	NONSTRUCTURAL PROTEIN P87	WOUND TUMOR VIRUS (WTV)	47-84	195-243	458-495					
PVP87_NPVOP	CAPSID PROTEIN P80	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS ()	7-51	99-142	156-204	221-298				
PVP8_BTIV10	CAPSID PROTEIN P87	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS ()	80-162	410-451						
PVP8_BTIV1	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	54-102	185-219						
PVP8_BTIV3	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	54-102	185-219						
PVP8_BTIV7	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	54-102	185-219						
PVP8_BTIV5	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	54-102	185-219						
PVP8_BTIV2A	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	54-102	185-219						
PVP8_BTIV5	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	54-102	185-219						
PVP8_FOWPV	NONSTRUCTURAL PROTEIN P8	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	54-102	185-219						
PVP9_RDV	STRUCTURAL PROTEIN VP8 PRECURSOR	FOWLPOX VIRUS	193-245							
PVP9_WTV	NONSTRUCTURAL PROTEIN P8	RICE DWARF VIRUS (RDV)	13-47	186-226						
PVP9_WTVN1	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	140-212							
PVP9_BVDV1	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN NJ) (WTV)	140-212							
PVP9_NPVAC	PUTATIVE GENOME-LINKED PROTEIN PRECURSOR	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1) (BYDV)	25-59							
PVPHE_NPVOP	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS ()	146-223							

PGCENE	ALLNOTIS	ALL Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PVPR_SIVXL	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORNGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS (11-201)	206-265							
PVPU_HVIA2	VPA PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-AIAC)	78-115							
PVPU_HVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)	1-38							
PVPU_HVIB4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BHI10 ISOLATE) (HI)	4-72							
PVPU_HVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BHI8 ISOLATE) (HIV)	5-72							
PVPU_HVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRIN ISOLATE) (I)	4-59							
PVPU_HVIB4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (IIV)	4-72							
PVPU_HVIE1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-40							
PVPU_HVIE2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELL ISOLATE) (HIV)	6-40							
PVPU_HVIE3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HI)	5-72							
PVPU_HVIE4	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB3 ISOLATE) (HIV)	2-50							
PVPU_HVIE5	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRC5F ISOLATE) (HI)	4-59							
PVPU_HVIE6	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HI)	4-40							
PVPU_HVIE7	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HI)	4-72							
PVPU_HVIE8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (REFIAT ISOLATE) (I)	1-39							
PVPU_HVIE9	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE) (HI)	4-59							
PVPU_HVIE10	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2CDC-234 ISOLATE)	6-40							
PVPU_HVIE11	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	21-78							
PVPU_HVIE12	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7) (I)	42-85							
PVPU_HVIE13	VPU PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-74	857-898						
PVPU_HVIE14	VPU PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	248-287							
PVPU_HVIE15	VPU PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	6-44							
PVPU_HVIE16	VPU PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	69-144							
PVPU_HVIE17	VPU PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	24-58	64-103						
PVPU_HVIE18	VPU PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	9-43							
PVPU_HVIE19	VPU PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	9-43							
PVPU_HVIE20	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN KN-4)	2-36	282-320						
PVPU_HVIE21	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	88-153	199-236						
PVPU_HVIE22	VPU PROTEIN	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	88-162	202-236						
PVPU_HVIE23	VPU PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	88-153	199-236						
PVPU_HVIE24	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	2-70	75-119	160-226					
PVPU_HVIE25	VPU PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	2-46	144-212	217-255					
PVPU_HVIE26	VPU PROTEIN	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	2-54	282-320						
PVPU_HVIE27	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN A3)	2-43	282-320						
PVPU_HVIE28	VPU PROTEIN	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	2-54	282-320						
PVPU_HVIE29	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN A44)	2-54	282-320						
PVPU_HVIE30	VPU PROTEIN	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B221)	2-54	282-320						
PVPU_HVIE31	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN KK3)	2-54	282-320						
PVPU_HVIE32	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN NCDV)	2-54	282-320						
PVPU_HVIE33	VPU PROTEIN	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	2-43	282-320						
PVPU_HVIE34	VPU PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	2-54	282-320						
PVPU_HVIE35	VPU PROTEIN	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN C12)	285-326							
PVPU_HVIE36	VPU PROTEIN	EQUINE ROTAVIRUS (STRAIN L338)	282-320							
PVPU_HVIE37	VPU PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	43-77							
PVPU_HVIE38	VPU PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	45-79							
PVPU_HVIE39	VPU PROTEIN	ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	2-43	282-320						
PVPU_HVIE40	VPU PROTEIN	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN RK9)	282-320							
PVPU_HVIE41	VPU PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	282-320							
PVPU_HVIE42	VPU PROTEIN	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN B17)	2-43	282-320						
PVPU_HVIE43	VPU PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	282-320							
PVPU_HVIE44	VPU PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HN126)	282-320							

PGENE	ALLNOTIS	ALLVIRUS (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8
FILENAME	PROTEIN	VIRUS	1-35	282-320						
PV509_ROTIN	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	1-35	282-320						
PV509_ROTIO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN NJ7)	2-43	282-320						
PV509_ROTIP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN NJD AND STRAIN D)	2-43	282-320						
PV509_ROTIR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	282-320							
PV509_ROTIS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RV)	282-320							
PV509_ROTIT	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	282-320							
PV509_ROTIV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	18-56	208-242	282-320					
PV509_ROTIV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	18-56	208-242	282-320					
PV509_ROTIP2	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	2-43	282-320						
PV509_ROTIP3	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN AT7/6)	282-320							
PV509_ROTIP4	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN CRW-8)	282-320							
PV509_ROTIP5	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN OSU)	2-56	208-242	282-320					
PV509_ROTIP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	282-320							
PV509_ROTIP7	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	282-320							
PV509_ROTIP8	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	18-56	208-242	282-320					
PV509_ROTIP9	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN K)	18-56	282-320						
PV509_ROTIP10	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BNH-1)	18-56	208-242	282-320					
PV509_ROTIP11	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (STRAIN YN)	1-35	282-320						
PV509_ROTIP12	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	282-320							
PV510_ROTIN	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	282-320							
PV510_ROTIS	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN NCDV)	73-161							
PV510_ROTIB	MINOR OUTER CAPSID PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	17-58							
PV510_ROTIC	NONSTRUCTURAL GLYCOPROTEIN NCVP5	BOVINE ROTAVIRUS (STRAIN UK)	73-161							
PV510_ROTID	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A28)	73-162							
PV510_ROTIE	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	73-162							
PV510_ROTIF	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6)	73-162							
PV510_ROTIG	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRUSTOL)	121-158							
PV510_ROTIH	NONSTRUCTURAL GLYCOPROTEIN NCVP5	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	73-136							
PV511_ROTGA	NONSTRUCTURAL GLYCOPROTEIN NCVP5	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	73-162							
PV511_ROTGI	NONSTRUCTURAL GLYCOPROTEIN NCVP5	ROTAVIRUS (GROUP B / STRAIN ADVY) (ADULT DIARRHEA ROTAVIRUS (GROUP B / STRAIN IDIR)	24-65	96-130						
PV511_ROTIS	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	9-68							
PV511_ROTIB	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	100-145							
PV511_ROTIC	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69N)	107-144							
PV511_ROTID	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE G / STRAIN D37)	107-144							
PV511_ROTIE	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	111-145							
PV511_ROTIF	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145							
PV511_ROTIG	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	111-145							
PV511_ROTIH	MINOR OUTER CAPSID PROTEIN	TOMATO BLACK RING VIRUS (STRAIN C) (TBRV)	217-265							
PV511_ROTIA	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN SBL-1) AND MUNPS VIRUS (STRAIN SBL)	9-46							
PV511_ROTIB	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN EDINGBURGH 2) AND (STRAIN EDINGBURGH 4)	13-47							
PV511_ROTIC	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN EDINGBURGH 4)	13-47							
PV511_ROTID	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN MATSUJAMA)	13-51							
PV511_ROTIE	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN DELFAST)	13-52							
PV511_ROTIF	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN ENDERS)	9-46							
PV511_ROTIG	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN JERYL-LYNN)	9-46							
PV511_ROTIH	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN KILHAN)	9-51							
PV511_ROTIA	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN BRISTOL 1)	13-55							
PV511_ROTIB	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN MIYAHARA VACCINE)	17-51							
PV511_ROTIC	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN TAKAHASHI)	13-47							
PV511_ROTID	MINOR OUTER CAPSID PROTEIN	MUNPS VIRUS (STRAIN URABE VACCINE A49)	13-47							
PV511_ROTIE	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 3 / STRAIN DEARING)	8-122	121-175	222-259					
PV511_ROTIF	SIGMA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 2 / STRAIN D5/ONES)	1-178							

PCGENE	ALLNOTIS	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8
PVS12_REOVD	SIGNA 1 PROTEIN PRECURSOR	REOVIRUS (TYPE 1 / STRAIN LANG)	3-107	112-198						
PVS12_REOVL	SIGNA 2 PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARNO)	350-384							
PVS1S_REOVD	SIGNA 2 PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	350-384							
PVS1S_REOVL	SIGNA 1-S PROTEIN	REOVIRUS (TYPE 1 / STRAIN DEARNO)	85-119							
PVS12_HEVBU	SIGNA 1-S PROTEIN	REOVIRUS (TYPE 2 / STRAIN DIONES)	7-45							
PVS12_HEVME	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN BURMA) (HEV)	318-352							
PVS12_HEVMY	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MEXICO) (HEV)	317-351							
PVS12_HEVPA	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN MYANMAR) (HEV)	318-352							
PVS12_HEVRH	STRUCTURAL PROTEIN 2 PRECURSOR	HEPATITIS E VIRUS (STRAIN PAKISTAN) (HEV)	318-352							
PVS1A_CAPV1	STRUCTURAL PROTEIN 2	HEPATITIS E VIRUS (ISOLATE RHESUS) (HEV)	186-220							
PVS1A_CAPV1	PROTEIN TJA	CAPRIPOXVIRUS (STRAIN INS-1)	120-158							
PVS1A_CAPV1	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN INS-1)	86-120							
PVS1A_CAPV1	T4 PROTEIN	CAPRIPOXVIRUS (STRAIN KS-1)	86-120							
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	235-290	595-629						
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451	617-658						
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UCANDA-1102)	468-502							
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AU4P) (EQU-1)	11-45							
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	98-136	698-744						
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	226-267							
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	588-622							
PVS1A_CAPV1	PROBABLE DNA PACKAGING PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIDA) (PIV-4A)	4-38							
PVS1A_CAPV1	Y1 PROTEIN	SENDAI VIRUS (STRAIN 694)	104-138							
PVS1A_CAPV1	HYPOTHETICAL 10.1 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-80							
PVS1A_CAPV1	HYPOTHETICAL 10.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-65							
PVS1A_CAPV1	HYPOTHETICAL 11.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	55-59							
PVS1A_CAPV1	HYPOTHETICAL 11.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-96							
PVS1A_CAPV1	HYPOTHETICAL 11.2 KD PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	53-87							
PVS1A_CAPV1	HYPOTHETICAL 12.2 KD PROTEIN IN COAT PROTEIN	FELINE CALCIVIRUS (STRAIN F108 FIV) (FCV)	4-38							
PVS1A_CAPV1	HYPOTHETICAL 12.1 KD PROTEIN IN COAT PROTEIN	FELINE CALCIVIRUS (STRAIN F9) (FCV)	4-38							
PVS1A_CAPV1	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (KIDV)	13-50							
PVS1A_CAPV1	HYPOTHETICAL 12.7 KD PROTEIN IN COAT PROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-331) (RIDV)	13-50							
PVS1A_CAPV1	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYA 844)	40-77							
PVS1A_CAPV1	HYPOTHETICAL 13.1 KD PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	43-77							
PVS1A_CAPV1	HYPOTHETICAL 14.5 KD PROTEIN IN 39 KD PROTEIN	ORGANIA PSEUDOTUGATA MULTICAPSID POLYHEDROSIS VIRUS	16-67							
PVS1A_CAPV1	HYPOTHETICAL 13.2 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	2-36	62-96						
PVS1A_CAPV1	HYPOTHETICAL 13.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39							
PVS1A_CAPV1	HYPOTHETICAL PROTEIN C-168	HUMAN ADENOVIRUS TYPE 2	119-166							
PVS1A_CAPV1	HYPOTHETICAL 15.6 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-35							
PVS1A_CAPV1	HYPOTHETICAL 17.8 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-45	77-111						
PVS1A_CAPV1	HYPOTHETICAL 18.0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	102-136	119-153						
PVS1A_CAPV1	HYPOTHETICAL 20.4 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-107							
PVS1A_CAPV1	HYPOTHETICAL 28.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	127-180							
PVS1A_CAPV1	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	117-154							
PVS1A_CAPV1	HYPOTHETICAL 31.5 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	7-97	100-141						
PVS1A_CAPV1	HYPOTHETICAL 31.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	230-278							
PVS1A_CAPV1	HYPOTHETICAL 37.7 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-241							
PVS1A_CAPV1	HYPOTHETICAL PROTEIN 3	SOYBEAN CHLOROTIC MOTTLE VIRUS	115-149							
PVS1A_CAPV1	HYPOTHETICAL 5.9 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	1-51							
PVS1A_CAPV1	HYPOTHETICAL PROTEIN 7	SOYBEAN CHLOROTIC MOTTLE VIRUS	56-94							
PVS1A_CAPV1	HYPOTHETICAL 83.7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-125	503-537	546-587	658-700				
PVS1A_CAPV1	HYPOTHETICAL PROTEIN 8	SOYBEAN CHLOROTIC MOTTLE VIRUS	46-83							
PVS1A_CAPV1	HYPOTHETICAL BANQU-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-43) (MUNICH)	74-115	184-221						

PCGENE	ALL NOTIS	ALL Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	VIRUS	29-70							
PYB05_FOWPM	HYPOTHETICAL BASHI-ORF4 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438)(MUNICHI)	3-37	61-95						
PYB06_FOWPM	HYPOTHETICAL BASHI-ORF3 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438)(MUNICHI)	115-149							
PYB07_FOWPM	HYPOTHETICAL BASHI-ORF5 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438)(MUNICHI)	344-378							
PYB10_FOWPM	HYPOTHETICAL BASHI-ORF7 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438)(MUNICHI)	162-253							
PYB12_FOWPM	HYPOTHETICAL BASHI-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438)(MUNICHI)	4-47	117-153						
PYB13_FOWPM	HYPOTHETICAL BASHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438)(MUNICHI)	122-163							
PYB12_EBV	HYPOTHETICAL BASHI-ORF13 PROTEIN	EPSTEIN-BARR VIRUS (ISOLATE HP-438)(MUNICHI)	458-506							
PYD11_HSV57	HYPOTHETICAL BBLF2 PROTEIN	HERPESVIRUS SAINRI (STRAIN 484-77)	147-188							
PYD30_FOWP1	HYPOTHETICAL 24.1 KD PROTEIN IN DIFFERENT REGION	FOWLPOX VIRUS (STRAIN PP-1)	160-204							
PYGA1_HSVNB	HYPOTHETICAL 30.9 KD PROTEIN	NIAREK'S DISEASE HERPESVIRUS (STRAIN BC-1) (MDIV)	176-211							
PYGA1_HSVNM	HYPOTHETICAL 23.6 KD PROTEIN IN GLYCOPROTEIN	NIAREK'S DISEASE HERPESVIRUS (STRAIN NDS1) (MDIV)	176-211							
PYH22_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	34-78	95-139						
PYH23_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	181-222							
PYH24_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	16-58							
PYH25_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	39-81							
PYH26_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	64-125							
PYH27_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	94-147							
PYH28_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	33-77							
PYH29_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	100-134							
PYH30_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	14-54							
PYH31_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	70-127							
PYH32_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	21-67							
PYH33_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	6-51	89-130						
PYH34_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	78-122							
PYH35_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	1-45							
PYH36_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	1-43							
PYH37_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	4-89							
PYH38_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	33-72							
PYH39_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	51-101	106-157						
PYH40_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	51-101	106-157						
PYH41_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	49-111	197-231						
PYH42_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	49-111	197-231						
PYH43_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	32-73							
PYH44_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	1-65							
PYH45_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	116-153							
PYH46_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	25-66							
PYH47_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	9-61							
PYH48_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	1-57	62-96	149-183					
PYH49_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	191-264							
PYH50_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	134-175							
PYH51_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	232-286	404-442						
PYH52_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	1-45							
PYH53_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	96-130							
PYH54_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	98-177							
PYH55_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	390-424							
PYH56_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	25-69	170-204						
PYH57_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	29-63							
PYH58_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	3-37							
PYH59_VACCV	HYPOTHETICAL 21.7 KD PROTEIN IN GLYCOPROTEIN	VACCINIA VIRUS (STRAIN WR)	78-112							

PCGENE	ALLNOTIS	All Viruses (no bacteriophages)									
FILENAME	PROTEIN	VIRUS									
PYVBH_VACCC	HYPOTHETICAL 7.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	
PYYCC_VACCC	HYPOTHETICAL 7.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-57								
PYYDB_VACCC	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-39								
PYYDB_VACCV	HYPOTHETICAL 8.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-48								
PYYDC_VACCV	HYPOTHETICAL 8.3 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	29-80								
PYYGB_VACCC	HYPOTHETICAL 7.3 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-80								
PYYIA_VACCC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-41								
		VACCINIA VIRUS (STRAIN COPENHAGEN)	10-51								
		VACCINIA VIRUS (STRAIN COPENHAGEN)	9-53								

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TABLE VI

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL VIRAL (NON-BACTERIOPHAGE) PROTEINS

PCGENE	1071784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
P194K TRVSV	POT 194 KD PRO	TOBACCO RATTLE VIRUS (STRAIN SYA1)	387-414	1087-1114	1142-1169						
PAANT_HDVAM	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVIT	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVMS	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PAANT_HDVS1	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133							
PAANT_HDVS2	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	16-43	106-133							
PAANT_HDVW0	DELTA ANTIGEN	HEPATITIS DELTA VIRUS (ISOLATE AMERICAN)	106-133								
PATHT_FOWPM	ANTITHROMBIN-III HOMOLOG	FOWLPOX VIRUS (ISOLATE IP-418(MUNICH))	72-106								
PATIL_VACCV	94 KD A-TYPE INCLUSION PRO	VACCINIA VIRUS (STRAIN WR)	14-56	67-94	424-472	570-625					
PATIL_VAVR	81 KD A-TYPE INCLUSION PRO	VARIOLA VIRUS	67-94	425-504	571-605						
PAT12_HSV11	ALPHA TRANS-IND FACTOR 78 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	308-335								
PAT12_HSV1F	ALPHA TRANS-IND FACTOR 77 KD PRO	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	308-335								
PAT12_HSV1B	ALPHA TRANS-IND FACTOR 82 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P)	294-321								
PAT1N_HSV1B	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4P)	255-289								
PAT1L_COWPX	A-TYPE INCLUSION PROTEIN	COWPOX VIRUS	14-56	67-94	426-498	572-620	837-841	914-990	1234-1261		
PBZLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220								
PCAH1_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	84-111	117-144							
PCAH1_VACCV	CELL SURFACE-BINDING PROTEIN	VACCINIA VIRUS (STRAIN WR)	84-111	117-144							
PCAH1_VAVR	CELL SURFACE-BINDING PROTEIN	VARIOLA VIRUS	84-111	117-144							
PCGLF_HSV1B	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P and Ky A)	312-339								
PCGH2_HSV1A	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	127-154								
PCO1A_POVHA	COAT PROTEIN VP1	HAMSTER POLYOMA VIRUS	159-186								
PCO2A_BFDV	COAT PROTEIN VP2	BUDGERIGAR FLEDGLING DISEASE VIRUS	160-187								
PCO2A_POVBO	COAT PROTEIN VP2	BOVINE POLYOMAVIRUS	49-76								
PCO2A_POVIC	COAT PROTEIN VP2	POLYOMAVIRUS JC	37-64								
PCO2A_POVLY	COAT PROTEIN VP2	LYMPHOTROPIC POLYOMA VIRUS	170-204								
PCO2A_POVMK	COAT PROTEIN VP2	MOUSE POLYOMAVIRUS (STRAIN KILHAM)	22-49								
PCO2A_SV40	COAT PROTEIN VP2	SIMIAN VIRUS 40	178-205								
PCO2A_AAV2	PROBABLE COAT PROTEIN 3	ADENO-ASSOCIATED VIRUS 2	120-147								
PCO3A_TTV1	COAT PROTEIN TP3	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-30								
PCOAT_ADVG	COAT PROTEIN VP1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	194-221								
PCOAT_BLYK	COAT PROTEIN	BEAN LEAFROLL VIRUS	96-123								
PCOAT_CMYC	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	63-90	193-220	461-488						
PCOAT_CMYD	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	64-91	194-221							
PCOAT_CMYE	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	63-90	193-220							
PCOAT_CMYN	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8155)	63-90	192-219	461-488						
PCOAT_CMYV	COAT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	64-91	194-221							
PCOAT_CMYV	COAT PROTEIN	CARNATION MOTTLE VIRUS	16-43								
PCOAT_CMYV	MAJOR CAPSID PROTEIN	PARAMECTUM BURSARIA CHLORELLA VIRUS 1	41-86								
PCOAT_CNV	COAT PROTEIN	CUCUMBER NECROSIS VIRUS	328-362								
PCOAT_CSMV	COAT PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	62-89								
PCOAT_CYMY	COAT PROTEIN	CLOVER YELLOW MOSAIC VIRUS	170-200								
PCOAT_FCVC6	COAT PROTEIN	FELINE CALCIVIRUS (STRAIN CE/68 FIV)	566-600								
PCOAT_FCVF4	COAT PROTEIN	FELINE CALCIVIRUS (STRAIN JAPANESE F4)	516-543	566-600							
PCOAT_FCVF9	COAT PROTEIN	FELINE CALCIVIRUS (STRAIN F9)	519-546	569-603							
PCOAT_FMYD	PROBABLE COAT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	220-247	358-385							
PCOAT_LSV	COAT PROTEIN	LILY SYMPTOMLESS VIRUS	32-700	246-273							
PCOAT_MISV	COAT PROTEIN	MISCANTHUS STREAK VIRUS	139-166								
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOT VIRUS	106-133								
PCOAT_PAVHB	PROBABLE COAT PROTEIN VP1	HUMAN PARVOVIRUS B19	524-551	569-596							
PCOAT_POPMV	COAT PROTEIN	POPLAR MOSAIC VIRUS (ISOLATE ATCC PV725)	46-73								
PCOAT_SOCMV	COAT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	128-162								
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	21-48								
PCOAT_TAV	COAT PROTEIN	TOMATO ASPERMATY VIRUS	23-50								
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN BS-3)	3-30	41-68							
PCOAT_TBSVC	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	97-134								

PCGENE	10717814	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	212-259								
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS									
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS	104-131								
PCOAT_TMV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	104-131								
PCOAT_TMYCO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN COWPEA)	78-132								
PCOAT_TMYDA	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAHLEMENSE)	104-131								
PCOAT_TMYER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	104-131								
PCOAT_TMYO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O and KOKUBU)	104-131								
PCOAT_TMYOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	104-131								
PCOAT_TMYTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATO/L)	104-131								
PCOAT_TMYA	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN A)	90-117								
PCOAT_TMYPS	COAT PROTEIN	TOBACCO RATTLE VIRUS (STRAINS PSO and PLB)	118-145								
PCOAT_TMYDA	COAT PROTEIN	TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	10-37								
PCOAT_TMYV	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS	41-68								
PCOAT_TMYVA	COAT PROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	41-68								
PDNB7_ADE07	EARLY E2A DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 7	46-71								
PDNB1_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PDNB1_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	437-464								
PDNB1_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN I1)	311-368	512-539							
PDNB1_HCMV5	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-618								
PDNB1_POVIC	DNA-BINDING PROTEIN	POLYOMAVIRUS JC	2-29								
PDNB1_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	413-462	512-559							
PDNL1_VACCC	DNA LIGASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	104-131	172-199	358-385						
PDNL1_VACCV	DNA LIGASE	VACCINIA VIRUS (STRAIN WR)	104-131	172-199	358-385						
PDNL1_VARV	DNA LIGASE	VARIOLA VIRUS	403-431	202-240							
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	338-365								
PDPOL_CBEPV	DNA POLYMERASE	CHORISTONEURA BIENNIS ENTOMOPHILUS	23-64	202-240							
PDPOL_CHV2	DNA POLYMERASE	CHLORELLA VIRUS NY-2A	338-365								
PDPOL_CHV71	DNA POLYMERASE	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	338-365								
PDPOL_FOWPV	DNA POLYMERASE	FOWLPOX VIRUS	17-51	370-416	621-655	772-799					
PDPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	751-780								
PDPOL_HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S3)	5-39								
PDPOL_HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL_HPBWD	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	5-39	304-331							
PDPOL_HPBGS	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								
PDPOL_HPBHE	DNA POLYMERASE	HERON HEPATITIS B VIRUS	5-39								
PDPOL_HPBVP	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINE/PDW294)	443-470								
PDPOL_HPBVZ	DNA POLYMERASE	HEPATITIS B VIRUS (SUBTYPE ADYW)	443-470								
PDPOL_HSV1	DNA POLYMERASE	ICTALURID HERPESVIRUS 1	328-366	710-737							
PDPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN I1)	621-652								
PDPOL_NPVAC	DNA POLYMERASE	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	598-643								
PDPOL_NPVLD	DNA POLYMERASE	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	357-384								
PDPOL_VACCC	DNA POLYMERASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	770-797								
PDPOL_VACCV	DNA POLYMERASE	VACCINIA VIRUS (STRAIN WR)	770-797								
PDPOL_VARV	DNA POLYMERASE	VARIOLA VIRUS	769-796								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326								
PDPOL_WHV59	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 59	290-331								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-242	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	289-330							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	290-331							
PDTHX_CORBE	DIPHTHERIA TOXIN HOMOLOG CRM228 PREC	CORYNEPHAGE BETA	516-533								
PDTHX_CORBE	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE BETA	521-560								
PDTHX_COROM	DIPHTHERIA TOXIN PRECURSOR	CORYNEPHAGE OMEGA	516-533								
PDUT_HSVF4	DEOXYU 5'-TRIPHOSPH NUCLYDROLASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PDUT_HSVSA	DEOXYU 5'-TRIPHOSPH NUCLYDROLASE	HERPESVIRUS SAIMIRI (STRAIN I1)	179-213								
PEIBL_ADE07	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 7	126-153								
PEIBL_ADE40	E1B PROTEIN, LARGE T-ANTIGEN	HUMAN ADENOVIRUS TYPE 40	136-163								
PEIBS_ADE12	E1B PROTEIN, SMALL T-ANTIGEN	HUMAN ADENOVIRUS TYPE 12	3-30								

PCGENE	10/178s4	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PEIBS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	122-173								
PEJ14_ADE02	EARLY E1B 14 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	2-29								
PEJ14_ADE07	EARLY E1B 13 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	21-48								
PEJ20_ADE03	EARLY E1B 20.1 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	5-32	70-100							
PEJ20_ADE35	EARLY E1B 20.3 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	70-107								
PEJ21_ADE35	EARLY E1B 20.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 35	125-161								
PEJGL_ADEM1	EARLY E1B 17.7 KD GLYCOPROTEIN	MOUSE ADENOVIRUS TYPE 1	38-46								
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN J005.4)	55-82								
PET1_VAV	EARLY TRANS FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	307-341	470-497							
PENV_AVIRE	ENV POLYPROTEIN	AVIAN RETICULOENDOTHELIOSIS VIRUS	420-468								
PENV_AVISN	ENV POLYPROTEIN	AVIAN SPLEEN NECROSIS VIRUS	6-33	426-474							
PENV_BAEYM	ENV POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	395-452								
PENV_BIV06	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	17-44	344-603	631-695						
PENV_BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	573-632	600-724						
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	304-377								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	304-377								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE VDM)	304-377								
PENV_BLV82	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	311-377								
PENV_BLV85	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	304-377								
PENV_BLV1	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-377								
PENV_CAEVG	ENV POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN G63)	165-192								
PENV_EIAV1	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P3 2-1)	668-712								
PENV_EIAV2	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P3 2-2)	668-695								
PENV_EIAV3	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P3 2-3)	668-712								
PENV_EIAV3	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE P3 2-5)	669-696								
PENV_EIAV9	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	668-712								
PENV_EIAVC	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	668-712								
PENV_EIAVW	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (STRAIN WSUS)	668-712								
PENV_EIAVY	ENV POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	668-712								
PENV_FENV1	ENV POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	33-60	517-544							
PENV_FIVPE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	650-680	722-749							
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	639-668	720-747							
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TN2)	640-679	721-748							
PENV_FLVC6	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	509-538								
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519								
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510-539								
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516								
PENV_FOAMV	ENV POLYPROTEIN	HUMAN SPUMARETROVIRUS	14-41	318-355	866-893						
PENV_FSVGA	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	510-539								
PENV_FSVGB	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN GA)	490-519								
PENV_FSVSM	ENV POLYPROTEIN	FELINE SARCOMA VIRUS (STRAIN SM)	493-522								
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203	523-564							
PENV_HTL1A	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	342-376								
PENV_HTL1C	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	342-376								
PENV_HTL1M	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE NT-2)	342-376								
PENV_HTLV2	ENV POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-370								
PENV_HV1A2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2SF2 ISOLATE)	544-592	630-682	790-825						
PENV_HV1B1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	545-594	631-683	791-818						
PENV_HV1B8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH18 ISOLATE)	540-589	626-678	786-813						
PENV_HV1B9	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRIN ISOLATE)	267-294	338-365	562-590						
PENV_HV1BR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	550-599	636-688	796-823						
PENV_HV1C4	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (CDC-451 ISOLATE)	397-424	557-606	643-695						
PENV_HV1EL	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	255-296	386-413	543-591						
PENV_HV1H2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	545-594	631-683	791-818						
PENV_HV1H3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB3 ISOLATE)	545-594	631-683	791-818						
PENV_HV1J3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HJ3 ISOLATE)	350-377	556-605	642-694						
PENV_HV1JR	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRC5F ISOLATE)	336-363	622-675	783-811						

PCGENE	10717824	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PENY_HV1KB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GH22)	274-301	555-596	637-677	716-824					
PENY_HV1MA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	547-595	633-707	794-826						
PENY_HV1ME	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NFA ISOLATE)	543-592	629-681	789-816						
PENY_HV1MN	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NM ISOLATE)	543-570	567-595	632-684	791-819					
PENY_HV1NS	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-3 ISOLATE)	326-360								
PENY_HV1ND	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	249-290	536-583	621-673	783-813					
PENY_HV1OY	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OVI ISOLATE)	344-393	630-704	789-820						
PENY_HV1PV	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	345-594	631-683	791-818						
PENY_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RFA12 ISOLATE)	280-307	331-378	554-602	640-692	800-832				
PENY_HV1S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	536-585	622-674	782-809					
PENY_HV1S3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	341-389	627-679	787-815						
PENY_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	545-593	631-683						
PENY_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WAI17 ISOLATE)	338-365	545-593	631-683	791-818					
PENY_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WAI22 ISOLATE)	334-361	536-584	622-674	782-809					
PENY_HV1Z2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2CDC-234 ISOLATE)	235-296	542-591	628-680	790-820					
PENY_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z3AIRE 3 ISOLATE)	231-292								
PENY_HV1Z6	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z6AIRE 6 ISOLATE)	256-297	545-593	630-682	792-822					
PENY_HV1Z8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z8AIRE 8 ISOLATE)	266-307	573-601	634-678	797-828					
PENY_HV1Z9	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z9AIRE 9 ISOLATE)	545-594	627-666	791-823						
PENY_HV2BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	532-591	621-648	653-697					
PENY_HV2CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAN2)	534-593	623-650	655-699						
PENY_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	61-88	523-550	555-582	644-638					
PENY_HV2G1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	60-87	524-551	556-583	613-640	645-693				
PENY_HV2N2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE N2)	61-88	524-551	556-583	613-640	662-689				
PENY_HV2R0	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	58-85	533-592	622-698						
PENY_HV2S2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST/24 1C42)	442-476	527-554	559-586	648-682					
PENY_HV2S8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SILISY)	557-584	614-673							
PENY_HV2S7	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	559-586	648-692					
PENY_MCFE	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-512								
PENY_MCFJ3	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CI-3)	488-515								
PENY_MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	317-544								
PENY_MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	510-539								
PENY_MLVF3	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	523-553								
PENY_MLVFF	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	523-553								
PENY_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	523-553								
PENY_MLVHO	ENV POLYPROTEIN	HOMULV MURINE LEUKEMIA VIRUS	510-540								
PENY_MLVK1	ENV POLYPROTEIN	KURSTEN MURINE LEUKEMIA VIRUS	40-81								
PENY_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	502-543								
PENY_MLVRO	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PENY_MLVVK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PENY_MMTVB	ENV POLYPROTEIN	MURINE MAMMARY TUMOR VIRUS (STRAIN BR6)	458-485	562-589							
PENY_MMTVG	ENV POLYPROTEIN	MURINE MAMMARY TUMOR VIRUS (STRAIN GR)	458-485	562-589							
PENY_MPMV	ENV POLYPROTEIN	MURINE MAMMARY TUMOR VIRUS (STRAIN GR)	422-470								
PENY_MSVFB	ENV POLYPROTEIN	FBI MURINE OSTEOSARCOMA VIRUS	57-84								
PENY_ONVVS	ENV POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-ONVY)	42-69	196-223	780-807						
PENY_RMCFV	ENV POLYPROTEIN	RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	487-517								
PENY_SFVI	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	14-41	866-901							
PENY_SFVL	ENV POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	18-45	319-357	673-700	863-898					
PENY_SIV1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM153 ISOLATE)	269-310	561-588	592-619	697-724					
PENY_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	270-301	566-593	597-624	658-685	703-730				
PENY_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR1-1)	257-291	336-372	548-603	634-708					
PENY_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	3-30	268-298	590-617	651-678					
PENY_SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	253-289	336-366	526-584	627-654				
PENY_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	8-35	158-185	589-650	784-816					
PENY_SIVM1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	120-150	550-609	671-715						
PENY_SIVM2	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM251 ISOLATE)	156-215	277-289							
PENY_SIVMK	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (KAW ISOLATE)	553-608								

PCGENE	107178.4	All Viruses (no bacteriophages)										AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS										549-608								
PENY_SIVM1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)										549-608	553-612	642-669	691-718					
PENY_SIVS4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)										281-308	554-595	646-722						
PENY_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PB1/BC13 ISOLATE)										286-313								
PENY_SMRVH	ENV POLYPROTEIN	SQUREL MONKEY RETROVIRUS (SMRV-H)										400-462								
PENY_SRV1	ENV POLYPROTEIN	SIMIAN RETROVIRUS SRV-1										409-471								
PENY_VILV	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN J514)										22-62	771-800							
PENY_VILV1	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN J514 / CLONE LV1-1KS1)										22-62	780-807							
PENY_VILV2	ENV POLYPROTEIN	VISNA LENTIVIRUS (STRAIN J514 / CLONE LV1-1KS2)										22-62	782-809							
PET1_FOWP1	EARLY TRANS FACTOR 70 KD SUBUNIT	FOWLPOX VIRUS (STRAIN FP-1)										190-224								
PET1_SFVKA	EARLY TRANS FACTOR 70 KD SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)										306-340	469-496	550-587						
PET1_VACCC	EARLY TRANS FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)										307-341	470-497							
PET1_VACCV	EARLY TRANS FACTOR 70 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)										307-341	470-497							
PET2_VACCC	EARLY TRANSCRIPTION FACTOR 82	VACCINIA VIRUS (STRAIN COPENHAGEN)										66-97	174-210	302-332						
PET2_VARY	EARLY TRANSCRIPTION FACTOR 82	VARIOLA VIRUS										66-97	174-210	302-332						
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)										109-139								
PFB2_ADE40	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40										179-237								
PFB2_ADE41	41.4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41										178-216								
PFB2_ADE42	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 2										308-335								
PFB2_ADE43	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40										324-351	446-473							
PFB2_ADE44	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41										339-366	461-488							
PFB2_ADE45	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3										118-145	164-191							
PFB2_ADE46	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1										275-305	325-352							
PFB2_ADE47	FIBER PROTEIN	FBR MURINE OSTEOSARCOMA VIRUS										138-169								
PFB2_ADE48	V-FOS/FOX TRANSFORMING PROTEIN	AVIAN RETROVIRUS NK24										116-147								
PFB2_ADE49	P53-V-FOS TRANSFORMING PROTEIN	FBI MURINE OSTEOSARCOMA VIRUS										162-193								
PFB2_ADE50	P53-V-FOS TRANSFORMING PROTEIN	AVIAN SPLEEN NECROSIS VIRUS										270-297								
PFB2_ADE51	GAG POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)										144-171								
PFB2_ADE52	GAG POLYPROTEIN	HUMAN SPINARETROVIRUS										621-648								
PFB2_ADE53	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS										396-442	447-474							
PFB2_ADE54	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)										91-118								
PFB2_ADE55	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (H3 ISOLATE)										91-118								
PFB2_ADE56	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)										87-118								
PFB2_ADE57	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)										88-115								
PFB2_ADE58	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)										88-115								
PFB2_ADE59	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)										88-115								
PFB2_ADE60	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)										88-115								
PFB2_ADE61	RETROVIRUS-RELATED GAG POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE										270-297								
PFB2_ADE62	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE										33-60	69-103	232-259						
PFB2_ADE63	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE										96-130								
PFB2_ADE64	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)										84-151	156-187							
PFB2_ADE65	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN C3H)										84-151								
PFB2_ADE66	RETROVIRUS-RELATED GAG POLYPROTEIN	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)										84-151	156-187							
PFB2_ADE67	RETROVIRUS-RELATED GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)										222-260								
PFB2_ADE68	MAJOR COAT PROTEIN	SACCHAROMYCES CEREVISIAE VIRUS L-A										497-531	624-651							
PFB2_ADE69	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)										473-507								
PFB2_ADE70	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K&W ISOLATE)										88-115								
PFB2_ADE71	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)										88-115								
PFB2_ADE72	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SMH4 ISOLATE)										88-115								
PFB2_ADE73	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PB1/BC13 ISOLATE)										88-115								
PFB2_ADE74	GAG POLYPROTEIN	SIMIAN SARCOMA VIRUS										397-443								
PFB2_ADE75	GAG POLYPROTEIN	SIMIAN RETROVIRUS SRV-1										223-261								
PFB2_ADE76	GAG POLYPROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)										184-211	321-348							
PFB2_ADE77	PROBABLE HELICASE	HERPESVIRUS SAIRMI (STRAIN 11)										418-449								
PFB2_ADE78	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)										490-517	701-728							
PFB2_ADE79	PROBABLE HELICASE	BOVINE CORONA VIRUS (STRAIN F15)										208-242								
PFB2_ADE80	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONA VIRUS (STRAIN LY-118)										208-242								
PFB2_ADE81	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONA VIRUS (STRAIN MEBUS)										208-242								
PFB2_ADE82	HEMAGGLUTININ-ESTERASE PRECURSOR	BOVINE CORONA VIRUS (STRAIN MEBUS)										208-242								

PCGENE	10717844	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PROTEIN	PROTEIN	VIRUS									
PHENX JAHTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUEIN/TEXNESSE/5/86)	386-452								
PHENX JAHTO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUEIN/TOKYO/71)	386-455								
PHENX JAHUR	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QUEIN/URUGUAY/11/61)	386-452								
PHENX JAJAP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/JAJAN/305/57)	386-453								
PHENX JAKIE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/KEV/59/79)	386-453								
PHENX JALEN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/LENGRAD/54/1)	386-453								
PHENX JAMAA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/24/82)	386-450								
PHENX JAMAB	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/ASTRAKHAN/26/82)	386-455								
PHENX JAMAO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/68/78)	387-453								
PHENX JAMEI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/1/71)	40-67	387-453							
PHENX JAME2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/10/72)	40-67	387-453							
PHENX JAMB6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MEMPHIS/6/86)	24-51	371-437							
PHENX JAMIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/MINK/SWEDEN/84)	31-58	382-441							
PHENX JAMT6	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/NT/60/68)	387-453								
PHENX JAPUE	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PILOT WIA/12/MAINE/12/84)	505-534								
PHENX JARUD	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/84)	29-56	425-478							
PHENX JAS2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/QU/77/70)	24-51								
PHENX JASH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/RUDY TURNSTONE/NEW JERSEY/47/85)	381-451								
PHENX JASTA	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/SHEARWATER/AUSTRALIA/72)	28-56	160-187	506-547						
PHENX JATAI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/STARLING/VICTORIA/5156/85)	119-146	384-443							
PHENX JATKI	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TAIWAN/1/86)	29-56								
PHENX JATKM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/IRELAND/1378/83)	415-445								
PHENX JATKO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/831/80)	381-451								
PHENX JATKP	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/ONTARIO/732/66)	507-534								
PHENX JATKW	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/OREGON/71)	32-62	194-221	381-422						
PHENX JAUDO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/WISCONSIN/1/66)	419-449	500-536							
PHENX JAUS5	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/TURKEY/AUSTRALIA/G70C/75)	21-55								
PHENX JAVIT	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/US/89/07/72)	40-67	387-453							
PHENX JAVIL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/VICTORIA/3/75)	29-56	435-478							
PHENX JAZCO	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	41-68	388-454							
PHENX JAZH2	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XIANFENG/2/89)	424-477								
PHENX JAZH3	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XWINE/COLORADO/1/77)	29-56	387-453							
PHENX JAZIN	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XWINE/HONG KONG/8/78)	371-437								
PHENX JAZJ	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XWINE/HONG KONG/12/82)	371-437								
PHENX JAZK	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XWINE/INDONESIA/1726/88)	418-478	506-547							
PHENX JAZL	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XWINE/NEW JERSEY/11/76)	418-478	506-547							
PHENX JAZM	HEMAGGLUTININ PRECURSOR	INFLUENZA A VIRUS (STRAIN A/XWINE/URUGUAY/1/84)	387-453								
PHENX JAZN	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	400-431	439-483							
PHENX JAZO	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/BONN/43)	390-421	429-473							
PHENX JAZP	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/ENGLAND/222/82)	398-429	437-481							
PHENX JAZQ	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/HONG KONG/6/87)	391-418	429-473							
PHENX JAZR	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/LEE/40)	399-430	438-482							
PHENX JAZS	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	389-420	428-472							
PHENX JAZT	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MEMPHIS/6/86)	393-424	432-476							
PHENX JAZU	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/MOREGON/2/80)	398-429	437-481							
PHENX JAZV	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/222/79)	398-429	437-481							
PHENX JAZW	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/US/83/1/00/83)	391-422	430-474							
PHENX JAZX	HEMAGGLUTININ PRECURSOR	INFLUENZA B VIRUS (STRAIN B/VICTORIA/2/87)	393-424	432-476							
PHENX JAZY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/CALIFORNIA/7/8)	495-571	439-483							
PHENX JAZZ	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/ENGLAND/892/83)	483-559								
PHENX JAZA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/GREAT LAKES/1167/54)	483-559								
PHENX JAZB	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HYOGO/1/83)	483-558								
PHENX JAZC	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN C/HANNESBURG/1/66)	496-572								

PCGENE	10717844	ALL Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PHENX_INCKY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CKYOTO/4/82)	482-558								
PHENX_INCKM	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CMSSISSIPPI/80)	482-558								
PHENX_INCKN	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CNARAR/82)	482-558								
PHENX_INCP1	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CPIC/BEIJING/1081)	483-559								
PHENX_INCP2	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CPIC/BEIJING/11581)	483-559								
PHENX_INCP3	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CPIC/BEIJING/43983)	483-559								
PHENX_INCTA	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CTAYLOR/123147)	483-559								
PHENX_INCTY	HEMAGGLUTININ PRECURSOR	INFLUENZA C VIRUS (STRAIN CYAMAGATA/1081)	483-559								
PHENX_NDVA	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/33)	64-91								
PHENX_NDVB	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	64-91								
PHENX_NDVC	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN D2676)	64-91								
PHENX_NDVE	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	64-91								
PHENX_NDVH	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	64-91								
PHENX_NDVI	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN MIYADERA/51)	64-91								
PHENX_NDVQ	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	64-91								
PHENX_NDVY	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B./48)	64-91								
PHENX_PHODV	HEMAGGLUTININ-NEURAMINIDASE	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	64-91								
PHENX_P10HW	HEMAGGLUTININ-NEURAMINIDASE	PHOCINE DISTEMPER VIRUS	39-66	46-73							
PHENX_P10H	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	79-110	166-393							
PHENX_P10B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN AUS/124854/74)	27-61								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/545/80)	27-76								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/9105/82)	23-70								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX/1267/83)	27-61								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/641/79)	27-61								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WASH/1511/73)	27-61								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	RACCOON POXVIRUS	166-214	236-283							
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z/ HOST MUTANTS)	79-106								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSHIM)	79-106								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HARRIS)	79-106								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HV)	79-106								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	79-106								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SEMIAN VIRUS 41	22-52	394-421							
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	119-146	175-202	216-243						
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN IHD-J)	109-146	175-202	216-243						
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN TIAN TAN)	119-146	175-202	216-243						
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN WR)	109-146	175-202	215-242						
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	VARIOLA VIRUS	111-148	177-211	214-244						
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 2	100-134								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 5	100-134								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPES 3 and 7	97-127								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 2	146-173	359-386	433-460						
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 5	348-375								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 40	396-423								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	BOVINE ADENOVIRUS TYPE 3	305-338								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	COWPOX VIRUS	28-55								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	COWPOX VIRUS	462-489								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA/1/V)	12-43								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA/1/V)	113-147								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	CAULIFLOWER MOSAIC VIRUS (STRAIN DA)	17-44								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	CAULIFLOWER MOSAIC VIRUS (STRAIN DA)	17-44								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	383-410								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	CARNATION ETCHED RING VIRUS	6-33								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	FIGWORT MOSAIC VIRUS (STRAIN DXS)	372-407								
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	SOYBEAN CHLOROTIC MOTTLE VIRUS	1-48	331-338							
PHENX_P10H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324								

PCGENE	1071784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	58-85	482-522							
PIC18_HSVSA	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAMIRI (STRAIN 11)									
PIC18_MCMVSA	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH1)	661-691								
PIE63_HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	248-275								
PIE68_HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	40-67								
PIE68_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAMIRI (STRAIN 11)	48-78								
PIR05_HCMVA	HYPOTHETICAL PROTEIN IRL5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	22-49								
PIR12_HCMVA	HYPOTHETICAL PROTEIN IRL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-162								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-62								
PKFES_FSVGA	TYROSINE KINASE TRANSF PROTEIN FES	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSSTEIN)	106-150								
PKFGR_FSVGR	TYROSINE KINASE TRANSF PROTEIN FGR	FELINE SARCOMA VIRUS (STRAIN GARDNER-KASHFIELD)	218-252								
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSF PROTEIN FMS	FELINE SARCOMA VIRUS (STRAIN NICDONOUGH)	327-362								
PKFPS_FJUSV	TYROSINE KINASE TRANSF PROTEIN FPS	FUJINAMI SARCOMA VIRUS	155-243	149-197							
PKITH_AMEPV	THYMIDINE KINASE	AMISACTA MOOREI ENTOMOPHILUS VIRUS	47-84								
PKITH_CAPVK	THYMIDINE KINASE	CAPRIPOXVIRUS (STRAIN KS-1)	41-68								
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAMIRI (STRAIN 11)	340-386								
PKITH_LTYT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V182)	334-361								
PKR74_HSV11	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	491-518								
PKR81_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)	141-168								
PKR81_VACCC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)	141-168								
PKR83_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN COPENHAGEN)	147-174								
PKR83_VACCC	POSSIBLE PROTEIN KINASE B12	VACCINIA VIRUS (STRAIN WR)	147-174								
PKRFT_VACCC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)	47-74								
PKRFT_VAVR	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS	47-74								
PKR05_AVISU	ROS TYROSINE KINASE TRANSF PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)	111-138								
PKRYK_AVISU	TYROSINE KINASE TRANSF PROTEIN RYK	AVIAN RETROVIRUS RPLJ0	22-49								
PKYES_AVISY	TYROSINE KINASE TRANSF PROTEIN YES	AVIAN SARCOMA VIRUS (STRAIN Y73)	199-233								
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	386-413								
PL100_ADE03	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	386-413								
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40	191-231								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	206-233								
PLMP1_EBV	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-175								
PLMP1_EBVC	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-175								
PLMP1_EBVR	LATENT MEMBRANE PROTEIN 1	EPSTEIN-BARR VIRUS (STRAIN RAJ1)	148-175								
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	294-321								
PMCEL_STYKA	MRNA CAPPING ENZYME, LARGE SUBUNIT	SHOPE FIBROMA VIRUS (STRAIN KASZA)	54-156	289-316	497-524	622-656					
PMCEL_VACCC	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-112	291-318	610-657						
PMCEL_VACCC	MRNA CAPPING ENZYME, LARGE SUBUNIT	VACCINIA VIRUS (STRAIN WR)	85-112	291-318	610-657						
PMCEL_VAVR	MRNA CAPPING ENZYME, LARGE SUBUNIT	VARIOLA VIRUS	85-112	291-318	610-657						
PMCE_ASF87	MRNA CAPPING ENZYME	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	279-313								
PMOVP_CGMYS	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN W)	170-197								
PMOVP_CGMVW	MOVEMENT PROTEIN	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	170-197								
PMOVP_ORSV	MOVEMENT PROTEIN	ODONTOGLOSSUM RINGSPOOT VIRUS	53-90								
PMOVP_TOMVA	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LIHA)	46-80								
PMOVP_TOMVL	MOVEMENT PROTEIN	TOMATO MOSAIC VIRUS (STRAIN LIJ)	46-80								
PMTC1_CHVNI	MODIFICATION METHYLASE CVIB1	CHLORELLA VIRUS NC-1A	143-170	229-256							
PMTC1_CHVPI	MODIFICATION METHYLASE CVIPI	PARAMECIUM BURSARIA CHLORELLA VIRUS 1	4-31	130-172							
PMTC_AVM42	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS CMII	232-266	373-402							
PMTC_AVM4C	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	233-267	376-403							
PMTC_AVM4D	MYC TRANSFORMING PROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS HBI	233-267	376-403							
PMTC_AVM6	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS MH2E21	239-268	377-404							
PMTC_AVM6K	MYC TRANSFORMING PROTEIN	AVIAN RETROVIRUS OK10	227-261	370-397							
PMTC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	393-420								
PMTC_FLYTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420								
PNCAP_BEV	NUCLEOCAPSID PROTEIN	BERNE VIRUS	49-76	129-156							
PNCAP_BUNLC	NUCLEOCAPSID PROTEIN	BUNYA VIRUS LA CROSSE	85-112								
PNCAP_BUNSH	NUCLEOCAPSID PROTEIN	BUNYA VIRUS SNOWSHOE HARE	96-123								
PNCAP_BUNYW	NUCLEOCAPSID PROTEIN	BUNYA VIRUS	48-75	189-220							

PCGENE	1071784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNCAP CCHV	NUCLEOCAPSID PROTEIN	CRIMINAL-CONGO HEMORRHAGIC FEVER VIRUS (ISOLATE C68031)	223-271								
PNCAP CDOV	NUCLEOCAPSID PROTEIN	CANINE DISTEMPER VIRUS (STRAIN ONDIERSTEPOORT)	140-174								
PNCAP CHAV	NUCLEOCAPSID PROTEIN	CHANDIPURA VIRUS (STRAIN I65314)	40-74								
PNCAP CYCAE	NUCLEOCAPSID PROTEIN	CANINE ENTERIC CORONAVIRUS (STRAIN K378)	191-227								
PNCAP CYPFU	NUCLEOCAPSID PROTEIN	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONA VIRUS (STRAIN PURD)	191-227								
PNCAP CYPH8	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86137004 / BRITISH ISOLAT	191-227								
PNCAP CYPBM	NUCLEOCAPSID PROTEIN	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	191-227								
PNCAP DUGBV	NUCLEOCAPSID PROTEIN	DUGBE VIRUS	238-265								
PNCAP FIV	NUCLEOCAPSID PROTEIN	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	182-209								
PNCAP HAZV1	NUCLEOCAPSID PROTEIN	HAZARA VIRUS (ISOLATE IC380)	6-33	256-283							
PNCAP HRSV1	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18337)	4-31	74-108	112-141						
PNCAP HRSV2	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PNCAP LASSG	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN GA391)	64-99	147-174							
PNCAP LASSJ	NUCLEOCAPSID PROTEIN	LASSA VIRUS (STRAIN JOSIAH)	64-99	467-504							
PNCAP LYCYA	NUCLEOCAPSID PROTEIN	LYMPHOCTIC CHORIOMENINGITIS VIRUS (STRAIN ARASTRONG)	64-97								
PNCAP MAGV	NUCLEOCAPSID PROTEIN	MAGUARI VIRUS	41-68	192-219							
PNCAP MOPE1	NUCLEOCAPSID PROTEIN	MOPELA VIRUS	64-99								
PNCAP PIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	377-404	455-482							
PNCAP PIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	377-404	444-488							
PNCAP PIH4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	376-403								
PNCAP PTPV	NUCLEOCAPSID PROTEIN	PUNTA TORO PHLEBOVIRUS	3-30								
PNCAP PUUMH	NUCLEOCAPSID PROTEIN	PUMALA VIRUS (STRAIN HALLNAS B1)	2-29								
PNCAP PUUMS	NUCLEOCAPSID PROTEIN	PUMALA VIRUS (STRAIN SOTKANO)	2-29								
PNCAP PVM	NUCLEOCAPSID PROTEIN	PNEUMONIA VIRUS OF MICE	93-120								
PNCAP RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	133-167								
PNCAP RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN P-V)	133-167								
PNCAP RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	133-167								
PNCAP SENDS	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	363-404								
PNCAP SENDE	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN ENDERS)	363-404								
PNCAP SENDZ	NUCLEOCAPSID PROTEIN	SENDAI VIRUS (STRAIN Z)	363-404								
PNCAP SFSV	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	4-31								
PNCAP SV41	NUCLEOCAPSID PROTEIN	SIMIAN VIRUS 41	507-534								
PNCAP TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	50-77								
PNCAP TOSV	NUCLEOCAPSID PROTEIN	TOSCANA VIRUS	6-33								
PNCAP ULUK	NUCLEOCAPSID PROTEIN	UKUKUMI VIRUS	68-102								
PNCAP VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-21)	284-314								
PNCAP VHSVM	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN NAKAH)	149-176	284-314							
PNCAP VSVIG	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW	56-83								
PNCAP VSVIO	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN	67-94	318-365							
PNCAP VSVSJ	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	56-83								
PNEF HV1EL	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	81-119								
PNEF HVIND	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	81-119								
PNEF HVIZ6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	86-124								
PNEF SV41	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	96-137								
PNRAM JABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ABLACK DUCK/AUSTRALIA/702/78)	47-81								
PNRAM JACAO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ACAMELMONGOLIA/82	33-64								
PNRAM JACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ACHILE/1/83)	16-43	50-91							
PNRAM JADAI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ADUCK/ALBERTA/287/76)	51-81								
PNRAM JADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ADUCK/GERMANY/49)	21-48								
PNRAM JAFPW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AFOWL PLAGUE VIRUS/WEYBRIDGE)	10-48	52-80	197-224						
PNRAM JAHKO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AQUEQUENECOR/167/74)	197-224	386-413							
PNRAM JAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AQUEQUENECOR/1/81)	5-44	46-76	364-400						
PNRAM JAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AKIEV/59/79)	50-81								
PNRAM JALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ALENINGRAD/54/1)	50-81								
PNRAM JAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ANAMPHIS/17/1H-ABELLA/1/42N)	16-43	50-81							
PNRAM JAPAR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN APAROTULSTER/73)	16-43	50-81							
PNRAM JAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN APUERTO RICO/87/4)	16-43								

PCGENE	10717184	All Viruses (no bacteriophage)										AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS										AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRNAM_IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ARUDY TURNSTONE/NEW JERSEY/60083)										49-88								
PRNAM_IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN ATERN/ALSTRA/1A/70C/71)										49-82								
PRNAM_IJUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AUSS/90/77)										50-81								
PRNAM_IJWHM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AWH/AL/MAINE/1/84)										49-88								
PRNAM_IJWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN AWH/SON/SMITH/103)										16-43								
PRNAM_IJBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN BLEB/40)										4-35								
PNIS1_SIDEV	PROB NONSTRUC PRO PRECURSOR	BOMBVX DENSONUCLEOSIS VIRUS										283-310								
PNIS2_SIDEV	PROB NONSTRUC PRO PRECURSOR	BOMBVX DENSONUCLEOSIS VIRUS										42-69								
PNIS3_SIDEV	NON-STRUCTURAL PROTEIN	IMPATIENS NECROTIC SPOT VIRUS (STRAIN NL-07)										95-122								
PNIS3_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPN11/IR-01)										5-32	412-462							
PNIS3_TSWVL	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (STRAIN LJ)										5-32								
PNTP1_AMEPV	NUCLEOSIDE TRIPHOSPHATASE I	AMSACTA MOOREI ENTOMOPOXVIRUS										28-69								
PNTP1_CBEVP	NUCLEOSIDE TRIPHOSPHATASE I	CHORISTONEURA BIENNIS ENTOMOPOXVIRUS										122-166	147-174	524-551						
PNTP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)										65-92	394-421	514-587						
PNTP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)										65-92	394-421	514-587						
PNTP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS										300-327	420-447	455-493						
PP100_HSV6U	MAJOR ANTIGENIC STRUCTL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)										81-108	189-216	688-715	705-812					
PPAP1_VACCC	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)										88-115								
PPAP1_VACCV	POLY(A) POL CATALYTIC SUBUNIT	VACCINIA VIRUS (STRAIN WR)										88-115								
PPAP1_VARP	POLY(A) POL CATALYTIC SUBUNIT	VARIOLA VIRUS										88-115								
PPAP1_CAPVK	POLY(A) POL REG SUBUNIT	CAPRIPOXVIRUS (STRAIN KS-1)										118-145								
PPAP2_FOWPV	POLY(A) POL REG SUBUNIT	FOWLPOX VIRUS										27-54								
PPB12_NPVAC	12.1 KD PROTEIN IN PE 5 REGION	AUTOGRAHA CALIFORNICA NUCLEAR POLYEDROSIS VIRUS										61-105								
PPB12_NPVOP	11.5 KD PROTEIN IN P26 5 REGION	ORGYIA PSEUDOTUGATA MULTICAPSID POLYEDROSIS VIRUS										61-95								
PPB18_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYEDROSIS VIRUS										204-248								
PPB48_NPVAC	48.3 KD IN PE-P26 INTERGENIC REGION	AUTOGRAHA CALIFORNICA NUCLEAR POLYEDROSIS VIRUS										4-38	51-78							
PPB51_ADEGX	PENTON PROTEIN	AVIAN ADENOVIRUS GAL-10 (STRAIN SA2)										96-123								
PPB11_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)										1272-1299	1775-1802	2236-2263						
PPB11_BAYMJ	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)										1774-1801	2234-2261							
PPB11_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS										481-508	1909-1941							
PPB11_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS										170-197	636-677	938-985	1161-1195					
PPB11_TBKVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN S)										1096-1123								
PPB12_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)										240-281	801-828							
PPB12_BAYMJ	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)										240-267	801-828							
PPB12_GCMV	RNA2 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS										11-38								
PPB12_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS										549-576								
PPB12_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)										982-1009								
PPB12_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)										17-44	1030-1057	1145-1172						
PPB12_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)										629-660	1082-1112	1303-1330	2233-2261	2476-2503	2609-2636	3613-3642		
PPB12_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)										1303-1333	2143-2171	2519-2546	2802-2829	3523-3550				
PPB12_BVMV	GENOME POLYPROTEIN	BEAN YELLOW MOSAIC VIRUS										96-123								
PPB12_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)										7-34	664-694	1062-1099	1900-1930					
PPB12_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRUGGS)										1040-1076								
PPB12_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1										645-672	841-868	1021-1057						
PPB12_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3										1024-1060	1881-1908							
PPB12_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4										644-673	1022-1058							
PPB12_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5										1024-1060								
PPB12_CTYV	GENOME POLYPROTEIN	CLOVER YELLOW VEIN VIRUS										120-154								
PPB12_DENIS	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)										1838-1885	2890-2935	2989-3016						
PPB12_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 1681)										1544-1571	1838-1885	2908-2935	2982-3016	3117-3147				
PPB12_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 1681-PDK33)										1544-1571	1838-1885	2485-2519	2908-2935	2982-3016	3117-3147			
PPB12_DEN2J	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)										1544-1571	1838-1885	2908-2935	3117-3147	3346-3373				
PPB12_DEN2P	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/51)										1544-1571	1838-1885	2905-2932	2979-3013	3114-3144	3343-3370			
PPB12_DEN2T	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)										1134-1161	1448-1475							
PPB12_DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3										837-864	1542-1569	1857-1884	2494-2521	2980-3014	3345-3372			
PPB12_DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4										2885-2930	2977-3011	3342-3369						
PPB12_EC11G	GENOME POLYPROTEIN	ECHOVIRUS 11 (STRAIN GREGORY)										213-249								

PCGENE	1071178-4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOLG_PPVNA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (ISOLATE NAT)	920-947	1497-1524	2770-2800						
PPOLG_PPVRA	GENOME POLYPROTEIN	PLUM POX POTYVIRUS (STRAIN RANKOVIC)	920-947	1497-1524	2770-2797						
PPOLG_PPSVII	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA)	500-527								
PPOLG_PPSVP	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN P / MUTANT IIA 5-1)	391-418								
PPOLG_PPSVW	GENOME POLYPROTEIN	PAPAYA RINGSPOT VIRUS (STRAIN W)	489-516								
PPOLG_PSBMY	GENOME POLYPROTEIN	PEA SEED-BORNE MOSAIC VIRUS (STRAIN DPDI)	271-315	1132-1177	1510-1537						
PPOLG_PVYC	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN Q (PVY))	433-460	701-735							
PPOLG_PVYHU	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN HUNGARIAN)	218-245	433-460	701-735	1486-1513	1777-1811				
PPOLG_PVYN	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN N)	433-460	701-735	1486-1513	1777-1811					
PPOLG_PVYO	GENOME POLYPROTEIN	POTATO VIRUS Y (STRAIN O)	433-460	701-735							
PPOLG_PYFV1	GENOME POLYPROTEIN	PARSNIP YELLOW FLECK VIRUS (ISOLATE P-121)	1124-1151	2707-2734							
PPOLG_SIMVS	GENOME POLYPROTEIN	SUGARCANE MOSAIC VIRUS (STRAIN SC)	10-37								
PPOLG_SYDVH	GENOME POLYPROTEIN	SWINE VESICULAR DISEASE VIRUS (STRAIN H2 %)	1024-1060								
PPOLG_SVDVU	GENOME POLYPROTEIN	1024-1060									
PPOLG_TBESV	GENOME POLYPROTEIN	TICK-BORNE ENCEPHALITIS VIRUS (STRAIN SOFIN)	87-121	234-272	1032-1061	2265-2292	2400-2436				
PPOLG_TBESW	GENOME POLYPROTEIN	BORNE ENCEPHALITIS VIRUS (WESTERN SUBTYPE)	1632-1659								
PPOLG_TEV	GENOME POLYPROTEIN	TOBACCO ETCH VIRUS	845-872	1148-1175	1416-1443	1773-1800					
PPOLG_TMEVB	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN BEAN 8386)	79-117	200-227							
PPOLG_TMEVD	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN DA)	90-117	200-227							
PPOLG_TMEVG	GENOME POLYPROTEIN	THEILER'S MURINE ENCEPHALOMYELITIS VIRUS (STRAIN GDV1)	90-117	200-227							
PPOLG_TUAV	GENOME POLYPROTEIN	TURNIP MOSAIC VIRUS	232-262	773-800							
PPOLG_TVMV	GENOME POLYPROTEIN	TOBACCO VEIN MOTTLING VIRUS	406-433	670-704	2708-2742						
PPOLG_WAV2	GENOME POLYPROTEIN	WATERMELON MOSAIC VIRUS II	202-229								
PPOLG_WNV	GENOME POLYPROTEIN	WEST NILE VIRUS	210-234	3385-3412							
PPOLG_YEFV1	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN 17D)	436-463								
PPOLG_YEFV2	GENOME POLYPROTEIN	YELLOW FEVER VIRUS (STRAIN PASTEUR 17D-204)	436-463								
PPOLG_ZYNAV	GENOME POLYPROTEIN	ZUCCHINI YELLOW MOSAIC VIRUS	69-96								
PPOLH_POLIM	GENOME POLYPROTEIN	POLIOVIRUS TYPE 1 (STRAIN MAHONEY)	1063-1101	1903-1933							
PPOLN_EEVT	NON-STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1402-1467	1894-1921							
PPOLN_FCVC6	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN CF168 FIV)	445-472								
PPOLN_FCVC9	NON-STRUCTURAL POLYPROTEIN	FELINE CALICIVIRUS (STRAIN F9)	1034-1061								
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	219-246	349-376							
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	219-246	349-376							
PPOLN_HEVMT	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	219-246	349-376							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	218-245	348-375							
PPOLN_MDDV	NON-STRUCTURAL POLYPROTEIN	MIDDELBURG VIRUS	955-982								
PPOLN_ONNYG	NON-STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	2453-2480								
PPOLN_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	313-347	1637-1684							
PPOLN_RRVN	NON-STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	1057-1084	1477-1504	2418-2445						
PPOLN_RRVT	NON-STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	146-173	1087-1114							
PPOLN_RUBVT	NON-STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THERIEN)	2060-2087								
PPOLN_SFV	NON-STRUCTURAL POLYPROTEIN	SEALIKI FOREST VIRUS	1154-1181								
PPOLN_SINDO	NON-STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	936-970								
PPOLN_WEEV	NON-STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	4-31								
PPOLS_IBDV3	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 5270)	231-258								
PPOLS_IBDVA	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	231-258								
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	231-258								
PPOLS_IBDVE	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN E)	231-258								
PPOLS_IBDVP	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PBG-98)	212-239								
PPOLS_IBDVS	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	231-258								
PPOLS_ONNYG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	336-383								
PPOLS_RRVN	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092)	939-973								
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	939-973								
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1138-1165								
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HRSP AND HRLP)	1138-1165								
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	920-947								
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN MT)	675-706	715-742							

PCGENE	1071178x4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	886-924								
POL CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	886-924								
POL COYMV	POL POLYPROTEIN	COMBILINA YELLOW MOTTLE VIRUS	333-360	818-865	1075-1102	1178-1205	1313-1347				
POL ELAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	472-505	826-853							
POL ELAVC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	472-505	826-853							
POL ELAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)	471-504	825-852							
POL FENVI	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	532-599	627-654							
POL FIVEP	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMIA)	442-473								
POL FMVD	POL POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DX5)	403-430								
POL GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703							
POL HTL1A	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (STRAIN ATK)	674-712								
POL HTL1C	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (CARIBBEAN ISOLATE)	674-712								
POL HV1A3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2SF2 ISOLATE)	218-245	620-661							
POL HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (DH10 ISOLATE)	230-257	637-673							
POL HV1B3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (DH15 ISOLATE)	230-257	632-673							
POL HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (DHU ISOLATE)	230-257	632-673							
POL HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	217-244	624-660							
POL HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	218-245	620-661	921-951						
POL HV1IR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HRCSE ISOLATE)	222-249	624-665							
POL HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	217-244	619-660							
POL HV1MN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	221-248	621-664							
POL HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-3 ISOLATE)	218-245	625-661							
POL HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	217-244	624-660							
POL HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYL ISOLATE)	218-245	620-661							
POL HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	230-257	637-673							
POL HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RFHAT ISOLATE)	217-244	619-660							
POL HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE 1217-244)	217-244	619-660							
POL HV1Z3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLATE)	217-244	619-660							
POL HV1ZB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-582								
POL HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	471-562								
POL HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600								
POL HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	491-568								
POL HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562								
POL HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	471-529								
POL HV2R0	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-563								
POL HV2S8	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBL13Y)	473-562								
POL HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582								
POL IPHA	POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	200-227	354-381	461-499						
POL IPMA	POL POLYPROTEIN	MOUSE INTRACISTERNAL A-PARTICLE	211-238	302-329	400-427						
POL IPMAI	POL POLYPROTEIN	PROBABLE POL POLYPROTEIN	130-157	221-248							
POL JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	204-231								
POL MLVAK	POL POLYPROTEIN	AKR MURINE LEUKEMIA VIRUS	453-480								
POL MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	805-832								
POL MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	805-832							
POL MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217							
POL MPNAV	POL POLYPROTEIN	SMIAN MASON-PFIZER VIRUS	574-612	670-697							
POL OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVY)	67-94	471-505	873-900						
POL RSPV	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	797-824								
POL RTBV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS	7-44	59-93	176-203	202-229	410-437	447-476	1022-1049		
POL RTBVP	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	7-44	59-93	176-203	202-229	410-437	447-476	1022-1049		
POL SFV1	POL POLYPROTEIN	SMIAN FOAMY VIRUS (TYPE 1)	427-454								
POL SIVAI	POL POLYPROTEIN	SMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	431-458	547-574	637-671						
POL SIVAI3	POL POLYPROTEIN	SMIAN IMMUNODEFICIENCY VIRUS (AGM266 ISOLATE)	45-72								
POL SIVAI3	POL POLYPROTEIN	SMIAN IMMUNODEFICIENCY VIRUS (AGM385 ISOLATE)	71-98								
POL SIVAG	POL POLYPROTEIN	SMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	436-463	482-516	642-669						
POL SIVAI	POL POLYPROTEIN	SMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM1 / CLONE GRI-1)	478-515								
POL SIVAI	POL POLYPROTEIN	SMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	637-691								
POL SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV/CP2)	242-269	626-685							

PCGENE	10217844	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
POL_SIVGB	POL POLYPYRROLINE	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	531-560	636-670							
POL_SIVM1	POL POLYPYRROLINE	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	531-560								
POL_SIVM2	POL POLYPYRROLINE	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	531-560								
POL_SIVS4	POL POLYPYRROLINE	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SXH4 ISOLATE)	496-523								
POL_SIVSP	POL POLYPYRROLINE	SIMIAN IMMUNODEFICIENCY VIRUS (PB1/RC13 ISOLATE)	499-526								
POL_SMRVH	POL POLYPYRROLINE	SQUARREL MONKEY RETROVIRUS (SMRV-H)	601-628								
POL_SOCMV	ENZYMATIC POLYPYRROLINE	SOYBEAN CHLOROTIC MOTTLE VIRUS	268-295	348-419							
POL_SRV1	POL POLYPYRROLINE	SIMIAN RETROVIRUS SRV-1	578-612	670-697							
POL_VILV	POL POLYPYRROLINE	VISNA LENTIVIRUS (STRAIN 1514)	490-524	881-919							
POL_VILV1	POL POLYPYRROLINE	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K51)	89-116	490-524	881-919						
POL_VILV2	POL POLYPYRROLINE	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1K52)	490-524	881-919							
PPR73_MMTVB	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	288-315								
PPR73_MMTVC	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN CH)	45-79								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	167-201								
PPYHD_CPVB	POLYHEDRIN PRECURSOR	BOMBIX MORI CYTOPLASMIC POLYHEDRIN VIRUS	37-71								
PPYHD_NPVAC	POLYHEDRIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDRIN VIRUS	13-47								
PPYHD_NPVAS	POLYHEDRIN	AGROTIS SEGETUM NUCLEAR POLYHEDRIN VIRUS	14-48	201-228							
PPYHD_NPVBM	POLYHEDRIN	BOMBIX MORI NUCLEAR POLYHEDRIN VIRUS	12-46								
PPYHD_NPVBS	POLYHEDRIN	BUZURA SUPPRESSARIA NUCLEAR POLYHEDRIN VIRUS	14-48								
PPYHD_NPVHC	POLYHEDRIN	HYPHANTHRIA CUREA NUCLEAR POLYHEDRIN VIRUS	13-40								
PPYHD_NPVLD	POLYHEDRIN	LYMANTRIA DISPAR MULTICAPSID NUCLEAR POLYHEDRIN VIRUS	14-48								
PPYHD_NPVMB	POLYHEDRIN	MAMESTRA BRASSICAE NUCLEAR POLYHEDRIN VIRUS	14-48								
PPYHD_NPVOP	POLYHEDRIN	ORGATIA PSEUDOTSUGATA MULTICAPSID POLYHEDRIN VIRUS	13-47								
PPYHD_NPVOS	POLYHEDRIN	ORGATIA PSEUDOTSUGATA SINGLE CAPSID NUCLEAR POLYHEDRIN VIRUS	14-48								
PPYHD_NPVPF	POLYHEDRIN	PANOLIS FLAMEA MULTIPLE NUCLEOCAPSID POLYHEDRIN VIRUS	14-48								
PPYHD_NPVSE	POLYHEDRIN	SPODOPTERA EXIGUA NUCLEAR POLYHEDRIN VIRUS (STRAIN US)	14-48								
PPYHD_NPVSF	POLYHEDRIN	SPODOPTERA FRUGIPERA NUCLEAR POLYHEDRIN VIRUS	14-48								
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68								
PREV_VILV	REV PROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	22-62								
PRUR1_ASPM2	RIBONUC-DIPHOSPH REDUCT LARGE CHA	AFRICAN SWINE FEVER VIRUS (ISOLATE NALAWI L11, 20/1)	7-41	88-119	363-390						
PRUR1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD 69)	622-649								
PRUR1_HSVB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PRUR1_HSVSA	RIBONUC-DIPHOSPH REDUCT LARGE CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	324-351								
PRUR1_VACCC	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN COPENHAGEN)	367-401								
PRUR1_VACCV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VACCINIA VIRUS (STRAIN WR)	367-401								
PRUR1_VARV	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARIOLA VIRUS	367-401								
PRUR1_VZVD	RIBONUC-DIPHOSPH REDUCT LARGE CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146								
PRUR2_HSVB1	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	90-117								
PRUR2_VACCV	RNA-POL-ASSOC TRANS SPEC FACTOR	VACCINIA VIRUS (STRAIN WR)	41-68	513-540							
PRUR4_VARV	RNA-POL-ASSOC TRANS SPEC FACTOR	VARIOLA VIRUS	41-75	77-104	513-540						
PRUR1_VACCC	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN COPENHAGEN)	237-264	587-616	810-837	961-992					
PRUR1_VACCV	DNA-DIRECTED RNA POL 147 KD	VACCINIA VIRUS (STRAIN WR)	237-264	587-616	810-837	961-992	1011-1038				
PRUR1_VARV	DNA-DIRECTED RNA POL 147 KD	VARIOLA VIRUS	237-264	587-616	810-837	961-992					
PRUR2_CAPYK	DNA-DIRECTED RNA POL 132 KD	CAPRIPOX VIRUS (STRAIN KS-1)	19-45	114-155							
PRUR2_COWPX	DNA-DIRECTED RNA POL 132 KD	COWPOX VIRUS	211-241	481-509							
PRUR2_VACCV	DNA-DIRECTED RNA POL 132 KD	VACCINIA VIRUS (STRAIN WR)	211-241	481-509							
PRUR2_VARV	DNA-DIRECTED RNA POL 132 KD	VARIOLA VIRUS	211-241	481-509							
PRUR4_CAPYK	DNA-DIRECTED RNA POL 132 KD	CAPRIPOX VIRUS (STRAIN KS-1)	36-63								
PRUR7_VACCV	DNA-DIRECTED RNA POL 19 KD	VACCINIA VIRUS (STRAIN WR)	8-35	43-70							
PRUR7_VARV	DNA-DIRECTED RNA POL 19 KD	VARIOLA VIRUS	43-70								
PRUR4_LELV	DNA-DIRECTED RNA POLYMERASE	LELYSTAD VIRUS	1533-1560								
PRUR4_EAV	DNA-DIRECTED RNA POLYMERASE	EQUINE ARTERITIS VIRUS	888-915	1639-1673							
PRRP1_LAKOR	RNA-DIRECTED RNA POL SUB P1	INFLUENZA A VIRUS (STRAIN AKOREA/426/68)	575-602								
PRRP2_IAANN	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN AJANN ARBOR/6/60)	119-146								
PRRP2_IADH2	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN ADUCK/HOKKAI/8/80)	119-146								
PRRP2_JAFR	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN AFOWL PLAGUE VIRUS/ROSTOCK/24)	119-146								
PRRP2_LAGU2	RNA-DIRECTED RNA POL SUB P2	INFLUENZA A VIRUS (STRAIN AGULL/MARYLAND/704/77)	119-146								

PCGENE	10717844	PROTEIN	10717844	FILE NAME	10717844	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRRPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAL VIRUS (STRAIN Z)	639-636	1082-1116	1729-1756	2145-2180								
PRRPL_SEOUH	RNA-DIRECTED RNA POLYMERASE	SEOUH VIRUS (STRAIN 80-39)	461-488	564-591	731-758	903-932								
PRRPL_SVSVR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 3 (STRAIN 21004-WR)	1096-1123	1250-1277	1680-1710	2120-2147								
PRRPL_SVSVR	RNA POLYMERASE BETA SUBUNIT	SONCHUS YELLOW NET VIRUS	825-859	1092-1119	1490-1520	1973-2000	2080-2107							
PRRPL_TSWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH/BR-01)	477-504	542-573	1119-1150	1195-1229	1330-1357	1415-1442	1671-1698	1857-1884	2083-2110			
PRRPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	2166-2193	2324-2368	2771-2798									
PRRPL_VSVH	RNA POLYMERASE BETA SUBUNIT	VEESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN HAZELH)	142-187	1037-1071	1304-1331									
PRRPL_VSVIO	RNA POLYMERASE BETA SUBUNIT	VEESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	1530-1557	1809-1836										
PRRPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VEESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	1205-1232	1809-1836										
PRRPL_ACLS	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	1540-1567	1768-1798										
PRRPL_BWTF	PUTATIVE RNA-DIR RNA POL	BET WESTERN YELLOW VIRUS (ISOLATE FL-1)	228-264	564-591										
PRRPL_BYDVI	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAV-PS1)	356-383											
PRRPL_BYDVP	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	772-799											
PRRPL_BYDVR	PUTATIVE RNA-DIR RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	772-799											
PRRPL_CARAV	PUTATIVE RNA-DIR RNA POL	CARNATION MOTTLE VIRUS	772-799											
PRRPL_CGMS	PUTATIVE RNA-DIR RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SI)	91-127	271-304	667-694									
PRRPL_IDVS	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 5270)	387-414	1040-1067										
PRRPL_IBDA	PUTATIVE RNA-DIR RNA POL	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 002-73)	336-363	392-419										
PRRPL_IPNV	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	661-688	717-744										
PRRPL_IPNV	PUTATIVE RNA-DIR RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP)	773-800											
PRRPL_LYCA	RNA POLYMERASE	LYMPHOCTIC CHORIOBLASTIC VIRUS (STRAIN ARNSTRONG)	773-800											
PRRPL_PMAVS	PUTATIVE RNA-DIR RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	834-886	1052-1079										
PRRPL_REOVD	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 3 / STRAIN DEARING)	402-429	709-736	1072-1099									
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN NF)	61-88											
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	61-88											
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	68-95	218-245	791-818									
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	65-95	218-245	791-841	975-1002								
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	3-44	75-102	363-390	543-585								
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	65-95	102-129	791-839	973-1002								
PRRPL_ROTBL	RNA-DIR RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA1)	65-95	791-839	973-1002									
PRRPL_ROTBL	RNA-DIRECTED RNA POLYMERASE	SACCHAROMYCES CEREVISIAE VIRUS L-A	147-188											
PRRPL_TACV	RNA POLYMERASE	TACARIBE VIRUS	161-204	241-271	1107-1134	1978-2008								
PRRPL_TMGVM	PUTATIVE RNA-DIR RNA POL	TABACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	230-257	1316-1343	1397-1424									
PRRPL_BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	99-133											
PRRPL_CDOVO	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEEPOORT)	315-370											
PRRPL_HRSVI	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141											
PRRPL_HRSVA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18337)	99-141											
PRRPL_HRSVL	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141											
PRRPL_MEAS	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141											
PRRPL_MEAS	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	315-370											
PRRPL_MEAS	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	315-370											
PRRPL_P1HB	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	315-370											
PRRPL_P1HC	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C15)	84-111	234-261	375-416									
PRRPL_P1HD	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	84-111	234-261	375-416									
PRRPL_P1HE	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-573)	84-111	232-262	375-416									
PRRPL_P1H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN CI-14083)	84-111	244-271	375-416									
PRRPL_P1HT	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS	167-194	222-256										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	167-194	222-256										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	34-91	255-282	285-314									
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	114-144	269-299										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38											
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	93-127											
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN Z / HOST MUTANTS)	330-357	379-420										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN 694)	330-357	379-420										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN FUSHIMI)	330-357	379-420										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN HARRIS)	330-357	379-420										
PRRPL_P1B	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN Z)	330-357	379-420										

PCGENE	1071754	All Viruses (no bacteriophage)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILENAME	PROTEIN	VIRUS									
PRPP SVS	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3)	205-232	236-263							
PSODC VACC	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WR)	72-99								
PSODC VAR	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	72-99								
PSHR AMBPV	SPHEROIDIN	AMSACTA MOOREI ENTOMOPHAGUS	91-118	140-167	361-390						
PSPI MYXVL	SERPIN 1	MYXOMA VIRUS (STRAIN LAUSANNE)	286-313								
PSPI VACC	SERINE PROTEINASE INHIBITOR 2	VACCINIA VIRUS (STRAIN WR)	59-86								
PSPIA VACC	SERINE PROTEINASE INH 2 HOMOLOG	VACCINIA VIRUS (STRAIN CPENHAGEN)	18-65								
PTIC2 CHVP1	TYPE II RESTRICTION ENZYME CVI11	PARAMETICUM BURSARIA CHLORELLA VIRUS 1	16-43								
PTA2 VACC	TRANS-ACTIVATOR PROTEIN A2	VACCINIA VIRUS	95-133								
PTAG8 FOWPV	TRANS-ACTIVATOR PROTEIN FPO	FOWLPOX VIRUS	3-51								
PTAG8 VACC	TRANS-ACTIVATOR PROTEIN GK1	VACCINIA VIRUS	3-30								
PTAG8 VAR	TRANS-ACTIVATOR PROTEIN GK1	VARIOLA VIRUS	3-30								
PTALA BFDV	LARGE T ANTIGEN	BUDGERIGAR FLEDGLING DISEASE VIRUS	291-318								
PTALA POVBO	LARGE T ANTIGEN	BOVINE POLYOMA VIRUS	502-537								
PTALA POVHA	LARGE T ANTIGEN	HAMSTER POLYOMA VIRUS	587-621								
PTALA POVLY	LARGE T ANTIGEN	LYMPHOTROPIC POLYOMA VIRUS	224-258	616-684							
PTALA POVM3	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN 3)	511-540								
PTALA POVMA	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN A2)	511-538								
PTALA POVMC	LARGE T ANTIGEN	MOUSE POLYOMA VIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	508-535								
PTATR NPVAC	TRANS-ACT TRANS REG PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	407-434								
PTATR NPVBM	TRANS-ACT TRANS REG PROTEIN	BOMBAY MORI NUCLEAR POLYHEDROSIS VIRUS	412-439	494-538	537-564						
PTATR NPVOP	TRANS-ACT TRANS REG PROTEIN	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	512-554								
PTEGU EBV	LARGE TEGMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1344-1371	1876-1903					
PTEGU HCMVA	PROBABLE LARGE TEGMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2229							
PTEGU HSV1	LARGE TEGMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	667-694	1673-1710							
PTEGU HSV6	LARGE TEGMENT PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN G5)	102-129	228-262	567-611	962-993	1098-1181	1661-1688	1884-1911		
PTEGU HSVB	LARGE TEGMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1205-1232						
PTEGU HSVSA	PROBABLE LARGE TEGMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	524-607	672-700	777-814	846-898	990-1017	1467-1497	2102-2135		
PTEGU VZVD	LARGE TEGMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609							
PTBM ADB07	DNA TERMINAL PROTEIN	HUMAN ADENOVIRUS TYPE 7	375-413								
PTMAF AVIS4	TRANSFORMING PROTEIN MAF	AVIAN MUSCULOPONEUROTIC FIBROSARCOMA VIRUS AS42	302-336								
PTOP1 SVYKA	DNA TOPOISOMERASE I	SHOPE FIBROMA VIRUS (STRAIN KASZA)	38-65	132-176							
PTOP1 VACC	DNA TOPOISOMERASE I	VACCINIA VIRUS	38-65								
PTOP1 VAR	DNA TOPOISOMERASE I	VARIOLA VIRUS	38-65								
PTOP2 ASF42	DNA TOPOISOMERASE II	AFRICAN SWINE FEVER VIRUS (ISOLATE NALAWI LIL 20/1)	902-936								
PTYSY HSVAT	THYMIDYLATE SYNTHASE	HERPESVIRUS ATELES	116-143								
PTYSY HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	120-147								
PUL06 EBV	VIRION PROTEIN BBF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	342-369						
PUL06 HSV11	VIRION PROTEIN UL6	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	586-613								
PUL06 HSVB	VIRION GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL06 HSVSA	VIRION GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	15-42	302-338	368-402						
PUL08 HCMVA	HYPOTHETICAL PROTEIN UL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL11 EBV	HYPOTHETICAL PROTEIN BBF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-42								
PUL13 HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL14 HSVB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PUL14 VZVD	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PUL16 HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PUL20 HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL21 HSVB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL21 VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407								
PUL25 HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	204-231	362-389						
PUL31 HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL32 HSVB	MAJOR ENVELOPE GLYCOPROTEIN 300	EQUINE HERPESVIRUS TYPE 1	345-375								
PUL34 HSV11	PROTEIN UL34	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	116-143								
PUL34 HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-235								
PUL34 VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-139								
PUL35 HCMVA	HYPOTHETICAL PROTEIN UL35	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								

PCGENE	1021734.4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PUL37_HSV11	PROTEIN UL37	HERPES SIMPLEX VIRUS TYPE 1 / STRAIN 17)	470-497	853-884							
PUL37_HSV11	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4F)	715-749	987-1014							
PUL37_HSV11	GENE 63 PROTEIN	HERPESVIRUS SAIMURI (STRAIN 11)	31-45	685-737							
PUL37_HSV11	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-134	485-512							
PUL37_HSV11	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	330-364								
PUL42_HSV11	DNA-BINDING PROTEIN UL42	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	231-258								
PUL43_VZVD	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	129-156	312-349							
PUL47_HSV11	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-148	448-485							
PUL47_HSV11	VIRION PROTEIN UL47	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	488-515								
PUL47_HSV11	97 KD ALPHA TRANS-INDUCING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	488-515								
PUL50_HCMVA	PROTEIN UL50	EQUINE HERPESVIRUS TYPE 4	190-217								
PUL52_EBV	PROB DNA REPLICATION PROTEIN BSLF1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-186								
PUL52_HSV11	DNA REPLICATION PROTEIN UL52	EPSTEIN-BARR VIRUS (STRAIN B95-8)	185-212	787-814							
PUL52_HSV11	PROB DNA REP GENE 36 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AD4F)	193-220	943-970							
PUL52_HSV11	PROB DNA REP GENE 4 PROTEIN	HERPESVIRUS SAIMURI (STRAIN 11)	130-157								
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-337								
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-101								
PUL70_HCMVA	UL70 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92								
PUL70_HCMVA	HYPOTHETICAL GENE 53 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-73								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HERPESVIRUS SAIMURI (STRAIN 11)	9-36								
PUL87_EBV	HYPOTHETICAL PROTEIN BICR1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	45-79								
PUL87_HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	409-436								
PUL87_HSV11	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMURI (STRAIN 11)	536-563	729-768							
PUL92_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	582-609								
PUL92_HSV11	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMURI (STRAIN 11)	107-144	168-196							
PUL93_HCMVA	PROTEIN UL93	HERPESVIRUS SAIMURI (STRAIN 11)	92-122								
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-53	314-381							
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71								
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL95	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	73-100	105-134							
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-31	443-477							
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-78								
PUL93_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	90-124								
PUL93_HCMVA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMURI (STRAIN 11)	135-176								
PUL93_HCMVA	URACIL-DNA GLYCOSYLASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	81-115								
PUL93_HCMVA	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-116	129-156							
PUL93_HCMVA	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)	85-116	129-156							
PUL93_HCMVA	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	85-116								
PUL93_HCMVA	HYPOTHETICAL PROTEIN HXL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-47								
PUL93_HCMVA	HYPOTHETICAL PROTEIN HYL4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	277-308								
PUL93_HCMVA	MEMBRANE PROTEIN HWLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	191-218								
PUL93_HCMVA	LIS 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	2-29								
PUL93_HCMVA	LIS 125 KD PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	702-729								
PUL93_HCMVA	LIS 137 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)	2-29								
PUL93_HCMVA	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLS)	59-86								
PUL93_HCMVA	HELICASE	TOBACCO RATTLE VIRUS (STRAIN PLS)	496-560	945-972							
PUL93_HCMVA	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLS)	79-113								
PUL93_HCMVA	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLS)	22-54	710-737	840-868						
PUL93_HCMVA	16 KD PROTEIN	BROME MOSAIC VIRUS	22-54	384-411	836-863	892-919					
PUL93_HCMVA	16 KD PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS	249-276								
PUL93_HCMVA	16 KD PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	11-38								
PUL93_HCMVA	16 KD PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	11-38	864-902							
PUL93_HCMVA	16 KD PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)	11-38								
PUL93_HCMVA	16 KD PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN J)	4-38	372-399							
PUL93_HCMVA	16 KD PROTEIN	Peanut stunt virus (STRAIN J)	11-38	271-298	376-403	857-884					
PUL93_HCMVA	16 KD PROTEIN	TOMATO ASPERM VIRUS	4-31								
PUL93_HCMVA	16 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	170-197								
PUL93_HCMVA	16 KD PROTEIN	PEA EARLY BROWNING VIRUS									
PUL93_HCMVA	16 KD PROTEIN	TOBACCO RATTLE VIRUS									

PCGENE	1071784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	48-75								
PV29K TRVTC	29 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	301-328								
PV2A DBMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	176-205								
PV2A CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS									
PV2A CMVN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	792-819	717-751							
PV2A PSVI	2A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)	325-352	722-756							
PV2A IAV	2A PROTEIN	TOMATO ASPERM VIRUS	313-340								
PV30K HCMVE	30 KD MAJOR EARLY PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN EISENHARDT)	194-221								
PV30K TRVTC	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	130-160								
PV31P ADE41	31 KD PHOSPHOPROTEIN	HUMAN ADENOVIRUS TYPE 41	15-42								
PV36Z ASF87	K362 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	75-102								
PV36Z ASF87	D363 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	3-30	172-199							
PV3A BMV	3A PROTEIN	BROME MOSAIC VIRUS	11-38								
PV3A CMVN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)	222-252								
PV3A CMVN	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN NI)	217-232								
PV3A CMVO	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)	222-253								
PV3A CMVY	3A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Y)	222-253								
PV3A IBVB	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	25-57								
PV3A IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UX181/66)	29-56								
PV3B IBVB	3B PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	6-33								
PV30K BYDVP	50 KD PROTEIN	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	119-146								
PV31K BWYVF	51 KD PROTEIN	BEE WESTERN YELLOW VIRUS (ISOLATE FL-1)	113-147	424-451							
PV31K BWYVF	51 KD PROTEIN	BEE WESTERN YELLOW VIRUS (ISOLATE GRI)	113-147	424-451							
PV46K PLRV1	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	124-151	438-472							
PV56K PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	124-151	438-477							
PV31K BSMV	51 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS	128-155								
PV70K PLRV1	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1)	110-140								
PV70K PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	110-140								
PV90K AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)	107-134								
PV40S VACC	PROTEIN A6	VACCINIA VIRUS (STRAIN COPENHAGEN)	152-216	250-277	283-310	314-355					
PV40S VACC	PROTEIN A6	VACCINIA VIRUS (STRAIN WR)	156-215	249-276	282-309	313-354					
PV40S VACC	PROTEIN A6	VARIOLA VIRUS	157-216	250-277	283-310	314-355					
PV40S VACC	PROTEIN A8	VACCINIA VIRUS (STRAIN COPENHAGEN)	176-206								
PV40S VACC	PROTEIN A8	VARIOLA VIRUS	176-206								
PV40S VACC	PROTEIN A9	VARIOLA VIRUS	60-95								
PV411 VACC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	219-283								
PV411 VACC	PROTEIN A11	VARIOLA VIRUS	220-284								
PV418 VACC	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	440-467								
PV430 VACC	PROTEIN A20	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-67	330-357							
PV430 VACC	PROTEIN A20	VARIOLA VIRUS	8-67	330-357							
PV432 VACC	PROTEIN A22	VACCINIA VIRUS (STRAIN COPENHAGEN)	45-72								
PV432 VACC	PROTEIN A22	VARIOLA VIRUS	56-83								
PV433 VACC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-144								
PV433 VACC	PROTEIN A23	VARIOLA VIRUS	95-144								
PV433 VACC	PROTEIN A23	VACCINIA VIRUS (STRAIN WR)	22-49								
PV433 VACC	PROTEIN A28	VACCINIA VIRUS (STRAIN WR)	22-49								
PV433 VACC	PROTEIN A30	VACCINIA VIRUS (STRAIN WR)	12-55								
PV431 VACC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	88-115								
PV431 VACC	PROTEIN A31	VARIOLA VIRUS	88-122								
PV434 VACC	PROTEIN A34	VACCINIA VIRUS (STRAIN COPENHAGEN)	87-114								
PV434 VACC	PROTEIN A34	VARIOLA VIRUS	87-114								
PV434 VACC	PROTEIN A34	VARIOLA VIRUS	87-114								
PV436 VACC	PROTEIN A36 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	120-155								
PV436 VACC	PROTEIN A36 PRECURSOR	VARIOLA VIRUS	127-154								
PV438 VACC	PROTEIN A38	VACCINIA VIRUS (STRAIN COPENHAGEN)	44-81								
PV438 VACC	PROTEIN A38	VACCINIA VIRUS (STRAIN WR)	44-81								
PV438 VACC	PROTEIN A38	VARIOLA VIRUS	44-91								
PV439 VACC	PROTEIN A39	VACCINIA VIRUS (STRAIN COPENHAGEN)	37-71	155-182							

PCGENE	FILE NAME	10717814	PROTEIN	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVA39_VACCV	PROTEIN A39			VIRUS	75-109	193-220							
PVA43_VACCC	PROTEIN A43			VACCINIA VIRUS (STRAIN WR)	145-172								
PVA43_VACCV	PROTEIN A43			VACCINIA VIRUS (STRAIN COPENHAGEN)	145-172								
PVA43_VACCV	PROTEIN A43			VACCINIA VIRUS (STRAIN COPENHAGEN)	146-173								
PVA47_VACCC	PROTEIN A47			VARIOLA VIRUS	143-184								
PVA47_VACCV	PROTEIN A47			VACCINIA VIRUS (STRAIN COPENHAGEN)	143-184								
PVA47_VACCV	PROTEIN A47			VACCINIA VIRUS (STRAIN COPENHAGEN)	142-184								
PVA49_VACCC	PROTEIN A49			VARIOLA VIRUS	61-91								
PVA49_VACCV	PROTEIN A49			VACCINIA VIRUS (STRAIN WR)	61-91								
PVA49_VACCV	PROTEIN A49			VARIOLA VIRUS	61-91								
PVA53_VACCC	PROTEIN A53			VACCINIA VIRUS (STRAIN COPENHAGEN)	55-82	126-156	435-462						
PVA53_VACCV	PROTEIN A53			VACCINIA VIRUS (STRAIN WR)	55-82	126-156	435-462						
PVAL1_BCTV	ALI1 PROTEIN			BEEF CURLY TOP VIRUS	22-49								
PVAL3_CLVK	ALI3 PROTEIN			CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	79-106								
PVAL3_CLVN	ALI3 PROTEIN			CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	79-106								
PVAL3_SLCV	ALI3 PROTEIN			SQUASH LEAF CURL VIRUS	101-128								
PVAL3_TYLCV	ALI3 PROTEIN			TOMATO YELLOW LEAF CURL VIRUS	79-129								
PVAT_CMYC	APHID TRANSMISSION PROTEIN			CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	22-70	93-129							
PVAT_CMYD	APHID TRANSMISSION PROTEIN			CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	22-70								
PVAT_CMYE	APHID TRANSMISSION PROTEIN			CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	22-70	93-129							
PVAT_CMYN	APHID TRANSMISSION PROTEIN			CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	22-70	93-129							
PVAT_CMYV	APHID TRANSMISSION PROTEIN			CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	22-70	93-129							
PVAT_CMYV	APHID TRANSMISSION PROTEIN			CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	22-70	93-130							
PVAT_CERY	APHID TRANSMISSION PROTEIN			CARNATION ETCHED RING VIRUS	102-138								
PVAT_FMYD	APHID TRANSMISSION PROTEIN			FIGWORT MOSAIC VIRUS (STRAIN DXS)	52-82	103-130							
PVB03_VACCV	PROTEIN B3			VACCINIA VIRUS (STRAIN COPENHAGEN)	108-135								
PVB04_VACCC	PROTEIN B4			VACCINIA VIRUS (STRAIN WR)	92-123	182-211	286-313	324-361					
PVB04_VACCV	PROTEIN B4			VACCINIA VIRUS (STRAIN WR)	92-123	182-211	286-313	324-361					
PVB04_VACCV	PROTEIN B4			VARIOLA VIRUS	89-127	182-211	286-313	324-361					
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PRO PREC			VACCINIA VIRUS (STRAIN LC16M0)	254-284								
PVB05_VACCC	PLAQUE-SIZE / HOST RANGE PRO PREC			VACCINIA VIRUS (STRAIN COPENHAGEN)	254-284								
PVB05_VACCL	PLAQUE-SIZE / HOST RANGE PRO PREC			VACCINIA VIRUS (STRAIN LISTER)	254-284								
PVB05_VACCV	PLAQUE-SIZE / HOST RANGE PRO PREC			VACCINIA VIRUS (STRAIN WR)	254-284								
PVB07_VACCV	PROTEIN B7 PRECURSOR			VACCINIA VIRUS (STRAIN WR)	28-62								
PVB08_VACCC	PROTEIN B8 PRECURSOR			VACCINIA VIRUS (STRAIN COPENHAGEN)	26-53								
PVB08_VACCV	PROTEIN B8 PRECURSOR			VACCINIA VIRUS (STRAIN WR)	26-53								
PVB11_VACCC	PROTEIN B11			VACCINIA VIRUS (STRAIN COPENHAGEN)	21-54								
PVB11_VACCV	PROTEIN B11			VACCINIA VIRUS (STRAIN WR)	5-38								
PVB16_COWPX	IL-1 BIND PRO PRECURSOR			COWPOX VIRUS	113-140								
PVB17_VACCC	PROTEIN B17			VACCINIA VIRUS (STRAIN COPENHAGEN)	258-285								
PVB17_VACCV	PROTEIN B17			VACCINIA VIRUS (STRAIN WR)	258-285								
PVB18_VACCC	PROTEIN B18			VACCINIA VIRUS (STRAIN COPENHAGEN)	337-375								
PVB18_VACCV	PROTEIN B18			VACCINIA VIRUS (STRAIN WR)	337-375								
PVB18_VACCV	PROTEIN B18			VARIOLA VIRUS	337-375								
PVB19_VACCC	SURFACE ANTIGEN S PRECURSOR			VACCINIA VIRUS (STRAIN COPENHAGEN)	182-212								
PVB19_VACCD	SURFACE ANTIGEN S PRECURSOR			VACCINIA VIRUS (STRAIN DAUREN I)	180-210								
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR			VACCINIA VIRUS (STRAIN WR)	180-210								
PVB19_VACCV	SURFACE ANTIGEN S PRECURSOR			VARIOLA VIRUS	180-210								
PVB20_VACCC	PROTEIN B20			VACCINIA VIRUS (STRAIN COPENHAGEN)	48-82								
PVB21_VACCV	PROTEIN B21			VACCINIA VIRUS (STRAIN WR)	64-91								
PVB21_BGMV	BL1 PROTEIN			BEAN GOLDEN MOSAIC VIRUS	120-147	248-275							
PVB21_CLVK	BL1 PROTEIN			CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	118-145								
PVB21_CLVN	BL1 PROTEIN			CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	118-145								
PVB21_PYMV	BL1 PROTEIN			POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	120-147								
PVB02_VACCC	PROTEIN C2			VACCINIA VIRUS (STRAIN COPENHAGEN)	405-432								
PVB02_VACCV	PROTEIN C2			VACCINIA VIRUS (STRAIN WR)	41-71	405-432							

PCGENE	10741784	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV04_SFVKA	PROTEIN C4	SHOPE FIBROMA VIRUS (STRAIN KASZA)	209-236	484-515							
PV04_VACC	PROTEIN C4	VACCINIA VIRUS (STRAIN COPENHAGEN)	12-46								
PV04_VACC	PROTEIN C4	VACCINIA VIRUS (STRAIN WR)	12-46								
PV04_VACC	PROTEIN C4	VARIOLA VIRUS	12-46								
PV05_SFVKA	HYPOHETICAL PROTEIN C3	SHOPE FIBROMA VIRUS (STRAIN KASZA)	85-125	152-179							
PV05_VACC	PROTEIN C3	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-65								
PV05_VACC	PROTEIN C3	VACCINIA VIRUS (STRAIN WR)	38-65								
PV05_VACC	PROTEIN C3	VARIOLA VIRUS	36-66								
PV07_VACC	PROTEIN C7	VACCINIA VIRUS (STRAIN WR)	80-111								
PV07_VACC	PROTEIN C7	VARIOLA VIRUS	80-111								
PV09_VACC	PROTEIN C9	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-69	82-116	178-205	232-279	289-323	575-605			
PV09_VACC	PROTEIN C9	VACCINIA VIRUS (STRAIN WR)	42-69	82-116	178-205	232-279	289-323	575-605			
PV10_VACC	PROTEIN C10	VACCINIA VIRUS (STRAIN COPENHAGEN)	136-180								
PV10_VACC	PROTEIN C10	VACCINIA VIRUS (STRAIN WR)	136-180								
PV13_SFVKA	PROTEIN C13	SHOPE FIBROMA VIRUS (STRAIN KASZA)	3-30	39-66	137-182	206-240					
PV13_SFVKA	PROTEIN C13	VACCINIA VIRUS (STRAIN COPENHAGEN)	111-152								
PV17_VACC	PROTEIN C17/B23	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-74								
PV18_VACC	PROTEIN C18/B24	VACCINIA VIRUS (STRAIN COPENHAGEN)	56-97								
PV19_SFVKA	PROTEIN C19	SHOPE FIBROMA VIRUS (STRAIN KASZA)	72-99								
PV20_VACC	PROTEIN C20/B26	VACCINIA VIRUS (STRAIN COPENHAGEN)	299-326								
PV22_VACC	PROTEIN C22/B28	VARIOLA VIRUS	847-874								
PV23_VACC	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	136-170	355-382							
PV24_VACC	MAJOR CAPSID PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6) (STRAIN UGANDA-1102)	769-799								
PV25_VACC	MAJOR CAPSID PROTEIN	HERPES VIRUS SAIMURI (STRAIN 11)	133-165	199-248							
PV26_VACC	DNA-BINDING PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	88-115								
PV27_VACC	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 2	87-114								
PV28_VACC	MINOR CORE PROTEIN	HUMAN ADENOVIRUS TYPE 5	6-33	184-211	321-348						
PV29_VACC	92.6 KD PROTEIN	FOWLOX VIRUS (STRAIN FP-1)	240-267	333-360							
PV30_VACC	PROTEIN D5	VACCINIA VIRUS (STRAIN COPENHAGEN)	240-267								
PV31_VACC	PROTEIN D5	VACCINIA VIRUS (STRAIN WR)	240-267								
PV32_VACC	PROTEIN D5	VARIOLA VIRUS	123-150								
PV33_VACC	PROTEIN D9	VACCINIA VIRUS (STRAIN COPENHAGEN)	123-150								
PV34_VACC	PROTEIN D9	VACCINIA VIRUS (STRAIN WR)	123-160								
PV35_VACC	PROTEIN D9	VARIOLA VIRUS	18-52								
PV36_VACC	PROTEIN D10	SHOPE FIBROMA VIRUS (STRAIN KASZA)	2-35								
PV37_VACC	DNA-BINDING PROTEIN	CARNATION ETCHED RING VIRUS	282-322								
PV38_VACC	PROTEIN E2	VARIOLA VIRUS	89-116	437-464							
PV39_VACC	PROTEIN E6	VACCINIA VIRUS (STRAIN COPENHAGEN)	89-116	437-464							
PV40_VACC	PROTEIN E6	VACCINIA VIRUS (STRAIN WR)	89-116	437-464							
PV41_VACC	PROTEIN E6	VARIOLA VIRUS	60-87	367-394	437-464						
PV42_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	21-48								
PV43_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	180-207								
PV44_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	103-130								
PV45_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	55-89								
PV46_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	25-59								
PV47_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	146-173								
PV48_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	21-48								
PV49_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	72-113								
PV50_VACC	EARLY 25.9 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	5-34								
PV51_VACC	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	17-51								
PV52_VACC	PROBABLE E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 5	137-184	334-361							
PV53_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	61-105	312-342							
PV54_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	313-340								
PV55_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	159-186								
PV56_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-193								
PV57_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	304-331								
PV58_VACC	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33									

PCGENE	107s17s.4	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVG01_HSVED	GENE 1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AMIP)	146-176								
PVG02_HSVBK	GENE 1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVG03_VACC	PROTEIN G3	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75	131-161	225-289	355-389					
PVG05_VARV	PROTEIN G5	VARIOLA VIRUS	48-75	124-161	255-289	355-389					
PVG07_HSVI	HYPOTH GENE 7 MEMB PRO	ICTALURID HERPESVIRUS 1	71-98								
PVG09_VACC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	308-338								
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WIR)	271-301								
PVG09_VARV	PROTEIN F1	VARIOLA VIRUS	308-338								
PVG12_SPVIR	GENE 12 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	11-45								
PVG17_HSVI	HYPOTHETICAL GENE 17 PROTEIN	ICTALURID HERPESVIRUS 1	177-204								
PVG18_HSVI	HYPOTHETICAL GENE 18 PROTEIN	ICTALURID HERPESVIRUS 1	174-208								
PVG1_SPVIR	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	260-287								
PVG1_SPV4	CAPSID PROTEIN	SPIROPLASMA VIRUS 4	287-314	383-410							
PVG22_HSVI	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	371-400	581-622	668-705	766-824					
PVG24_HSVI	HYPOTHETICAL GENE 24 PROTEIN	ICTALURID HERPESVIRUS 1	31-58								
PVG28_HSVI	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	253-290	497-528							
PVG28_AMEPV	HYPOTHETICAL G2R PROTEIN	AMSACTA MOOREI ENTOMOPPOXVIRUS	31-64	91-118							
PVG2_SPVIR	GENE 2 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	285-326								
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4	146-173	175-205	262-310						
PVG4_HSVI	HYPOTHETICAL GENE 14 PROTEIN	ICTALURID HERPESVIRUS 1	95-122								
PVG7_HSVI	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	442-469								
PVG39_HSVI	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	651-678	1088-1115							
PVG31_AMEPV	HYPOTHETICAL G3L PROTEIN	AMSACTA MOOREI ENTOMOPPOXVIRUS	2-29								
PVG3_SPVIR	GENE 3 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	15-49								
PVG3_SPV4	GENE 3 PROTEIN	SPIROPLASMA VIRUS 4	18-52	87-148							
PVG45_HSVSA	HYPOTHETICAL GENE 45 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165								
PVG46_HSVI	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	142-169	346-373	897-924	973-1007					
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394								
PVG48_AMEPV	GAR PROTEIN	AMSACTA MOOREI ENTOMOPPOXVIRUS	4-31								
PVG4_SPVIR	GENE 4 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	116-146								
PVG1_HSVI	HYPOTH GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	34-61	87-114							
PVG32_HSVSA	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74								
PVG36_HSVI	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	582-609								
PVG5_SPVIR	GENE 5 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	65-92								
PVG3_SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	56-83								
PVG8_HSVI	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	550-584								
PVG64_HSVI	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	477-504								
PVG65_HSVI	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	1213-1234								
PVG66_HSVI	HYPOTHETICAL GENE 66 PROTEIN	ICTALURID HERPESVIRUS 1	362-406								
PVG67_HSVI	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	1342-1369								
PVG68_HSVI	HYPOTHETICAL GENE 68 PROTEIN	ICTALURID HERPESVIRUS 1	261-288								
PVG72_HSVI	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	447-481								
PVG75_HSVI	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1	388-422								
PVG76_HSVI	HYPOTHETICAL GENE 76 PROTEIN	ICTALURID HERPESVIRUS 1	200-227								
PVG7_SPV4	GENE 7 PROTEIN	SPIROPLASMA VIRUS 4	14-44								
PVG1_BVB8	PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	1230-1260	2408-2435							
PVG2_CVB8	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	399-426	642-676	1022-1084	1278-1305					
PVG2_CVB9	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	399-426	642-676	1022-1084	1278-1305					
PVG2_CVB19	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L118)	399-426	642-676	1022-1084	1278-1305					
PVG2_CVB18	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN NEBUS)	399-426	642-676	1022-1084	1278-1305					
PVG2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	399-426	642-676	1022-1084	1278-1305					
PVG2_CVB2	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	399-426	642-676	1022-1084	1278-1305					
PVG2_CVB22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	770-797	809-875	1036-1112						
PVG2_CVB4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	36-63	591-632	978-1040						
PVG2_CVB4S	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A59)	36-63	591-632	978-1040						
PVG2_CVB5C	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN HMV / VARIANT CL-2)	643-684	1030-1092							
PVG2_CVB1H	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN HMV)	502-543	889-951							

PCGENE	1071/244	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGL2_CVPFS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN FS72)	69-110	69-110	1072-1145	1351-1389					
PVGL2_CVPMI	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN MILL 69-110)	692-733	692-733	1069-1145	1351-1389					
PVGL2_CVPPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR 67-107)	690-731	690-731	1067-1143	1351-1387					
PVGL2_CVPPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN PUR 67-107)	690-731	690-731	1067-1143	1351-1387					
PVGL2_CVPR8	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/13/004 / BRITISH ISOLAT)	468-509	468-509	1129-1165						
PVGL2_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 84/4)	468-509	468-509	1129-1165						
PVGL2_CVPRT	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN NEB7)	690-731	690-731	1067-1143	1351-1387					
PVGL2_EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102	68-102							
PVGL2_FIPV	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	180-233	180-233	709-736	1072-1148	1356-1392				
PVGL2_IDV6	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6W3)	809-816	809-816	1057-1091						
PVGL2_IDV8	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	808-835	808-835	1056-1090						
PVGL2_IDV2	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D74)	809-836	809-836	1057-1091						
PVGL2_IDV3	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB523)	808-835	808-835	1056-1090						
PVGL2_IDV4	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 141)	808-835	808-835	1056-1090						
PVGL2_IDV5	E2 GLYCOPROTEIN PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95-122	95-122	631-658						
PVGL2_IDV7	GLYCOPROTEIN GP10 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD149)	25-88	25-88	397-424	440-467	851-878				
PVGL2_IDV9	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	50-88	50-88	397-424	435-462	852-879				
PVGL2_IDV1	GLYCOPROTEIN 1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1	427-454	427-454							
PVGL2_IDV2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	447-474	447-474							
PVGL2_IDV3	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A)	443-470	443-470	934-961						
PVGL2_IDV4	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	486-513	616-643						
PVGL2_IDV5	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	443-470	443-470	934-961						
PVGL2_IDV6	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	443-470	934-961						
PVGL2_IDV7	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	443-470	934-961						
PVGL2_IDV8	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	93-120	93-120	352-379						
PVGL2_IDV9	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	381-408	441-475						
PVGL2_IDV10	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	469-510	469-510							
PVGL2_IDV11	GLYCOPROTEIN C PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	469-510	469-510							
PVGL2_IDV12	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151	124-151							
PVGL2_IDV13	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295-322	295-322							
PVGL2_IDV14	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295-322	295-322							
PVGL2_IDV15	GLYCOPROTEIN E PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2)	111-148	111-148							
PVGL2_IDV16	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A1908)	38-65	38-65	154-202	216-243	442-469	486-531			
PVGL2_IDV17	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	38-65	154-202	216-243	444-471	488-533			
PVGL2_IDV18	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	38-65	154-202	216-243	444-471	488-533			
PVGL2_IDV19	FUSION GLYCOPROTEIN PRECURSOR	CANINE DISTEMPER VIRUS (STRAIN ONDERSHOOP)	252-293	252-293	340-367						
PVGL2_IDV20	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 1837)	38-65	38-65	154-202	442-471	488-515				
PVGL2_IDV21	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A2)	38-65	38-65	154-202	213-243	488-518				
PVGL2_IDV22	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65	38-65	154-202	216-243	444-471	488-515			
PVGL2_IDV23	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN R5-2)	38-65	38-65	154-202	213-243	442-471	488-518			
PVGL2_IDV24	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN EDMONSTON AND HALLE)	228-262	228-262							
PVGL2_IDV25	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	231-265	231-265							
PVGL2_IDV26	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	228-262	228-262							
PVGL2_IDV27	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	20-54	20-54	447-486						
PVGL2_IDV28	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	20-54	20-54	447-486						
PVGL2_IDV29	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	20-54	20-54	447-486						
PVGL2_IDV30	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	151-178	151-178	426-511						
PVGL2_IDV31	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	151-178	151-178	426-512						
PVGL2_IDV32	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45)	151-178	151-178	426-512						
PVGL2_IDV33	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	151-178	151-178	426-512						
PVGL2_IDV34	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN BI-HITCHNER/47)	151-178	151-178	426-512						
PVGL2_IDV35	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN/45)	151-178	151-178	426-512						
PVGL2_IDV36	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	151-178	151-178	426-512						
PVGL2_IDV37	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN MIYADEN/51)	151-178	151-178	437-512						
PVGL2_IDV38	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	151-178	151-178	433-512						
PVGL2_IDV39	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	151-178	151-178	426-512						
PVGL2_IDV40	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G.B./48)	151-178	151-178	426-512						

PCGENE	107171s4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PVGLF_NDVU	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ULSTER67)	151-178	426-512							
PVGLF_PHDV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPOR VIRUS	36-63	221-262	309-336						
PVGLF_PUHC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C19)	147-174	210-266							
PVGLF_PPH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS	90-117	141-175	238-266	483-528					
PVGLF_PPHG	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN GREER)	90-117	141-175	238-266	483-528					
PVGLF_PPHH	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIBA)	90-117	141-175	238-266	483-528					
PVGLF_PPHI	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	459-497						
PVGLF_PPHJ	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NII 47885)	115-182	207-241	457-497						
PVGLF_PPHK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O)	224-265	458-485							
PVGLF_PPHL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L)	224-265	458-485							
PVGLF_PPHM	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN Z / HOST MUTANTS)	122-149	211-245	480-507						
PVGLF_PPHN	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN FUSHIMI)	122-149	211-245	480-507						
PVGLF_PPHO	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN HARRIS)	122-149	211-245	480-507						
PVGLF_PPHQ	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN HV1)	122-149	211-245	480-507						
PVGLF_PPHR	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN Z)	122-149	211-245	480-507						
PVGLF_PPHS	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 41	144-185	241-269	459-496						
PVGLF_PPHV	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3)	137-171	417-444							
PVGLF_PPHW	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS	124-161	193-200	457-484						
PVGLF_PPHX	FUSION GLYCOPROTEIN PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-557								
PVGLF_PPHY	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-123								
PVGLF_PPHZ	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	63-93								
PVGLF_PPH1	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RS03857)	66-107								
PVGLF_PPH2	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN RS6190)	243-273								
PVGLF_PPH3	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 860)	66-93								
PVGLF_PPH4	MAJOR SURFACE GLYCOPROTEIN G	EQUINE HERPESVIRUS TYPE 4	271-298								
PVGLF_PPH5	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
PVGLF_PPH6	GLYCOPROTEIN G PRECURSOR	RABIES VIRUS (STRAIN STREET)	489-519								
PVGLF_PPH7	SPIKE GLYCOPROTEIN PRECURSOR	VEICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	472-499								
PVGLF_PPH8	GLYCOPROTEIN H PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	549-576	619-648							
PVGLF_PPH9	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-136	270-297							
PVGLF_PPH0	GLYCOPROTEIN H PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN G5)	106-135								
PVGLF_PPH1	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	62-89	360-403							
PVGLF_PPH2	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	388-415								
PVGLF_PPH3	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	47-111								
PVGLF_PPH4	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE (ISOLATE L74)	512-546	914-941	1128-1255						
PVGLF_PPH5	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA CROSSE	913-950								
PVGLF_PPH6	M POLYPROTEIN PRECURSOR	DUGBE VIRUS	340-374	504-535	682-709						
PVGLF_PPH7	M POLYPROTEIN PRECURSOR	HANTAN VIRUS (STRAIN B-1)	945-972								
PVGLF_PPH8	M POLYPROTEIN PRECURSOR	HANTAN VIRUS (STRAIN HO10)	73-100	693-720							
PVGLF_PPH9	M POLYPROTEIN PRECURSOR	HANTAN VIRUS (STRAIN LEE)	75-102								
PVGLF_PPH0	M POLYPROTEIN PRECURSOR	HANTAN VIRUS (STRAIN 76-118)	75-102								
PVGLF_PPH1	M POLYPROTEIN PRECURSOR	IMPATIENS NECROTIC SPOT VIRUS	628-655	1069-1101							
PVGLF_PPH2	M POLYPROTEIN PRECURSOR	PROSPECT HILL VIRUS	69-96								
PVGLF_PPH3	M POLYPROTEIN PRECURSOR	PUMALA VIRUS (STRAIN HALLNAS B1)	72-110								
PVGLF_PPH4	M POLYPROTEIN PRECURSOR	PUMALA VIRUS (STRAIN SOTKAMO)	72-110								
PVGLF_PPH5	M POLYPROTEIN PRECURSOR	SEOL VIRUS (STRAIN 80-39)	513-540	693-720							
PVGLF_PPH6	M POLYPROTEIN PRECURSOR	SEOL VIRUS (STRAIN R22)	71-100	513-540	694-721						
PVGLF_PPH7	M POLYPROTEIN PRECURSOR	SEOL VIRUS (STRAIN SR-11)	71-100	513-540	694-721						
PVGLF_PPH8	NONSTRUCT GLYCOPRO GNS PRECURSOR	BOVINE EPHEMERAL FEVER VIRUS	523-564								
PVGLF_PPH9	PEPLOMER GLYCOPROTEIN PRECURSOR	BERNE VIRUS	48-82	1145-1179	1184-1211	1505-1532					
PVGLF_PPH0	GLYCOPROTEIN POLYPROTEIN PRECURSOR	JUNIN ARENAVIRUS	14-41								
PVGLF_PPH1	GLYCOPROTEIN POLYPROTEIN PRECURSOR	LASSA VIRUS (STRAIN GA391)	86-113								
PVGLF_PPH2	GLYCOPROTEIN POLYPROTEIN PRECURSOR	MOPELA VIRUS	86-113	316-346							
PVGLF_PPH3	GLYCOPROTEIN POLYPROTEIN PRECURSOR	PICHINDE ARENAVIRUS	334-375								
PVGLF_PPH4	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS	109-136	315-350							
PVGLF_PPH5	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V5)	303-338								

PCGENE	1072178.4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLY TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN V7)	302-337								
PVGLY TACV7	GLYCOPROTEIN POLYPROTEIN PRECURSOR	TACARIBE VIRUS (STRAIN TRVL 11598)	303-338								
PVGNM CFSMV	GENOME POLYPROTEIN M	COWPEA SEVERE MOSAIC VIRUS (STRAIN DG)	192-221								
PVGPB EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-6)	104-149								
PVGP EB0V	STRUCTURAL GLYCOPROTEIN PRECURSOR	EBOLA VIRUS	280-314								
PVGP MABVM	STRUCTURAL GLYCOPROTEIN PRECURSOR	NARBURG VIRUS (STRAIN MUSOKE)	559-589	619-646							
PVGP MABVP	STRUCTURAL GLYCOPROTEIN PRECURSOR	MARBURG VIRUS (STRAIN POPP)	559-589	619-646							
PVH03 VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN COPENHAGEN)	132-166								
PVH03 VACCC	PROTEIN H5	VACCINIA VIRUS (STRAIN WR)	132-166								
PVH03 VARV	PROTEIN H5	VARIOLA VIRUS	64-91	150-184							
PVHEL LSV	PROBABLE HELICASE	LILY SYMPTOMLESS VIRUS	130-160								
PVHRP VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	241-275								
PVHRP VACCC	HOST RANGE PROTEIN	VACCINIA VIRUS (STRAIN WR)	241-275								
PVH01 VACCC	PROTEIN I1	VACCINIA VIRUS (STRAIN COPENHAGEN)	90-117	153-180							
PVH01 VARV	PROTEIN I1	VARIOLA VIRUS	90-117	153-180							
V03 VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN COPENHAGEN)	160-190								
V03 VACCC	PROTEIN I3	VACCINIA VIRUS (STRAIN WR)	160-190								
V03 VARV	PROTEIN I3	VARIOLA VIRUS	160-190								
V08 VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN COPENHAGEN)	290-317	593-632							
V08 VACCC	PUTATIVE RNA HELICASE I8	VACCINIA VIRUS (STRAIN WR)	290-317	593-632							
V08 VARV	PUTATIVE RNA HELICASE I8	VARIOLA VIRUS	290-317	593-632							
VIE1 MCHVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288								
VIE2 NPVP	IMMEDIATE-EARLY PROTEIN IE-2	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	355-385								
VIE1 NPVAC	IE-REG PROTEIN IE-N	AUTOCORCA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	217-225	343-400							
VIF HVIRH	VIRION INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RPMAT ISOLATE)	62-89								
VIF SVAI	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1)	2-36								
VIMP HSVEB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174								
VIMP HSVA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN I1)	80-107								
VINT SSV1	PROBABLE INTEGRASE	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	73-100								
V01 VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-56								
V01 VACCC	PROTEIN J1	VACCINIA VIRUS (STRAIN WR)	22-56								
V01 VARV	PROTEIN J1	VARIOLA VIRUS	22-56								
V01 CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-383								
V01 FPVL	PROBABLE L1 PROTEIN	AVIAN PAPILLOMAVIRUS FPV-L	38-45								
V01 HPV08	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	354-392								
V01 HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
V01 HPV23	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	19-46								
V01 HPV41	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	345-372								
V01 HPV51	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	19-46								
V01 HPV58	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	45-72								
V02 HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
V02 HPV1	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	415-442								
V03 REOVD	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 3 / STRAIN DEARING)	330-357								
V03 REOVL	MINOR CORE PROTEIN LAMBDA 3	REOVIRUS (TYPE 1 / STRAIN LANG)	330-357								
V06 IRV1	L56 PROTEIN	ITPULA IRIDESCENT VIRUS	146-180	623-652							
PVMI REOVL	MINOR VIRION STRUCTURAL PROTEIN M1	REOVIRUS (TYPE 1 / STRAIN LANG)	290-317								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1	REOVIRUS (TYPE 3 / STRAIN DEARING)	625-662								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1A	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1B	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1D	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1E	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1F	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1G	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1H	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1I	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1J	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1K	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1L	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1M	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1N	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1O	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1P	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1Q	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1R	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1S	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1T	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1U	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1V	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1W	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1X	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1Y	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1Z	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AA	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AB	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AC	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AD	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AE	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AF	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AG	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AH	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AI	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AJ	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AK	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AL	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AM	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AN	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AO	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AP	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AQ	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AR	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AS	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AT	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AU	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AV	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AW	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AX	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AY	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1AZ	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BA	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BB	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BC	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BD	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BE	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BF	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BG	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BH	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BI	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BJ	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BK	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BL	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BM	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BN	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BO	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BP	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BQ	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BR	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BS	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BT	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BU	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BV	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BW	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BX	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BY	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1BZ	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1CA	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1CB	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1CC	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								
PVMI REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1CD	REOVIRUS (TYPE 3 / STRAIN DEARING)	624-661								

PGENE	107178.4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMA1_PIBB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PVMA2_PIBH	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVMA3_PVH4	MATRIX PROTEIN	SMIAN VIRUS 41	323-353								
PVMB1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN NIEBUS)	175-209								
PVMB2_CVTR	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	175-209								
PVMB3_BVB6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 6982)	21-48	184-218							
PVMB4_BVB8	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	21-48	184-218							
PVMB5_BVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE 1602)	21-48	184-218							
PVMB6_BVB4	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN K8853)	184-218								
PVMP_CMYC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	220-254	273-324							
PVMP_CMYD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D71)	29-36	220-254	273-324						
PVMP_CMYE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BDC)	227-254	273-324							
PVMP_CMYN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8151)	220-254	273-324							
PVMP_CMY5	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	220-254	273-324							
PVMP_CMYW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	220-254	273-324							
PVMP_CERY	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	26-53	100-127							
PVMP_SOCMV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	4-31	78-118							
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	294-328								
PVMT1_DHV1	MATRIX PROTEIN 1	DHORI VIRUS (STRAIN INDIAN/131/61)	38-65	217-264							
PVMT2_MTXVL	M-T2 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	163-190								
PVMT3_MTXVL	M-T3 PROTEIN	MYXOMA VIRUS (STRAIN LAUSANNE)	465-492								
PVMT4_ROTFC	NONSTRUCTURAL PROTEIN NS1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	83-113								
PVNCN_PAVBO	PROBABLE NONCAPSID PROTEIN NS1	BOVINE PARVOVIRUS	149-176								
PVNC5_AADV	NONCAPSID PROTEIN NS-1	ALEUTIAN MINK DISEASE PARVOVIRUS (STRAIN G)	86-148								
PVNC5_ADEV	NONCAPSID PROTEIN NS-1	AEDS DENDONUCLEOSIS VIRUS (STRAIN GRV 002 002)	14-41	279-339	487-517	585-612	780-817	821-848			
PVNC5_MUMM	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS (STRAIN MVM4)	35-62	262-289							
PVNC5_MUMV	NONCAPSID PROTEIN NS-1	MURINE MINUTE VIRUS	35-62	262-289							
PVNC5_PAVH8	NONCAPSID PROTEIN NS-1	HUMAN PARVOVIRUS B19	236-270								
PVNC5_PAVH1	NONCAPSID PROTEIN NS-1	HAMSTER PARVOVIRUS H1	35-62								
PVNC5_PAVP1	NONCAPSID PROTEIN NS-1	PORCINE PARVOVIRUS (STRAIN NADU-2)	24-55	169-196	316-346						
PVNS1_EHDV1	NONSTRUCTURAL PROTEIN NS1	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN ALBERTA 411-438)	171-198								
PVNS1_IALA	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN IALASKA/677)	171-198								
PVNS1_IANN	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN IANN ARBOR/660)	171-198								
PVNS1_IACH	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ACHILLE/783)	171-198								
PVNS1_IACKG	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ACHICKEN/GERMAN/YN49)	171-198								
PVNS1_IACKJ	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ACHICKEN/JAPAN/24)	168-195								
PVNS1_IADA2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ADUCK/ALBERTA/6076)	171-198								
PVNS1_IAFOM	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AFORT MONMOUTH/147)	171-198								
PVNS1_IAFOW	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AFORT WARREN/150)	171-198								
PVNS1_IALF1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ALBENGRAD/13457)	171-198								
PVNS1_IAMA6	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AMALLARD/ALBERTA/8876)	171-198								
PVNS1_IAP11	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERTA/12179)	171-198								
PVNS1_IATK8	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN APINTAIL/ALBERTA/13879)	171-198								
PVNS1_IATK9	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ATURKEY/BETHLEHEM-GLILIT/1492-B/82)	171-198								
PVNS1_IATK1	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ATURKEY/CANADA/63)	171-198								
PVNS1_IATK2	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ATURKEY/GERMANY/1872)	171-198								
PVNS1_IADDO	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN ADOORN/00772)	171-198								
PVNS1_IADUS	NONSTRUCTURAL PROTEIN NS1	INFLUENZA A VIRUS (STRAIN AUSSR/9077)	171-198								
PVNS2_IATK1	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN BPA/79)	171-198								
PVNS2_IATK2	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN ATURKEY/OREGON/71)	87-114								
PVNS2_IATK3	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN BLEE/40)	51-78								
PVNS2_IATK4	NONSTRUCTURAL PROTEIN NS2	INFLUENZA B VIRUS (STRAIN BYAMAGATA/173)	51-78								
PVNS2_IATK5	NONSTRUCTURAL PROTEIN NS2	INFLUENZA C VIRUS (STRAIN C/1950)	71-98								
PVNS3_CVPS	NONSTRUCTURAL PROTEIN 3-1	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN ES772-9-36)	9-36								
PVNS4_CVH21	NONSTRUCTURAL PROTEIN 4	HUMAN CORONAVIRUS (STRAIN 229E)	6-40								
PVNS4_RSV	NONSTRUCTURAL PROTEIN 4	RICE STRIKE VIRUS	11-45								
PVNS7_CVCAE	NONSTRUCTURAL PROTEIN 7	CANINE ENTERIC CORONAVIRUS (STRAIN K378)									

PCGENE	102178.4	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVNUC JAPAR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN APAROTULSTER/71)	378-405								
PVNUC JAPUE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN APUE/8/4)	378-405								
PVNUC JARUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ARUDY TURNSTONE/NEW JERSEY/47/85)	378-405								
PVNUC JASE0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASEAL/MASSACHUSETTS/1/80)	378-405								
PVNUC JASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASIEAR/VA/TERAUS/TRA/1/72)	378-405								
PVNUC JASIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASINGAPORE/1/57)	378-405								
PVNUC JATEI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATEAL/JELAND/29/80)	378-405								
PVNUC JATCN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATURKEY/MINNESOTA/1/66/81)	378-405								
PVNUC JATKO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATURKEY/ONTARIO/7/32/66)	378-405								
PVNUC JATRS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATERN/SOUTH AFRICA/61)	378-405								
PVNUC JATX7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATERN/TURKINIA/1/172)	378-405								
PVNUC JATX1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATXAS/1/77)	378-405								
PVNUC JAUDO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AUDORN/20/72)	378-405								
PVNUC JAUS5	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AUSSR/90/77)	378-405								
PVNUC JAVI6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVICTORIA/5/68)	378-405								
PVNUC JAWIN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AWIA/1/EM/AIN/2/28/84)	378-405								
PVNUC JAWHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AWHAL/PACIFIC OCEAN/1/97/6)	378-405								
PVNUC JAWIL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AWILSON-SMITH/03)	378-405								
PVNUC JAWIS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AWISCONSIN/3/22/88)	378-405								
PVNUC JAZ29	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/29/37)	378-405								
PVNUC JAZ41	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/41/49)	378-405								
PVNUC JAZCA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/CAMBI/10/5)	378-405								
PVNUC JAZDA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/DANONG/9/83)	378-405								
PVNUC JAZOE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/GERMANY/2/81)	378-405								
PVNUC JAZH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/HONG KONG/6/76)	378-405								
PVNUC JAZH3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/HONG KONG/1/26/82)	378-405								
PVNUC JAZH4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/HONG KONG/1/27/82)	378-405								
PVNUC JAZI1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOWA/1/5/90)	378-405								
PVNUC JAZI2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOWA/1/97/6/11)	378-405								
PVNUC JAZI3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOWA/4/6)	378-405								
PVNUC JAZJ1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/ITALY/4/3/77/6)	378-405								
PVNUC JAZJ2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/ITALY/2/79)	378-405								
PVNUC JAZJ3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/ITALY/1/81)	378-405								
PVNUC JAZJ4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/ITALY/3/8/89)	378-405								
PVNUC JAZJA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/JAMESBURG/4/2)	378-405								
PVNUC JAZMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/MAY/54)	378-405								
PVNUC JAZNE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/NETHERLANDS/12/83)	378-405								
PVNUC JAZOH	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/OHIO/2/3/5)	378-405								
PVNUC JAZON	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/ONTARIO/2/81)	378-405								
PVNUC JAZTE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/TENNESSEE/2/47/7)	378-405								
PVNUC JAZW1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/WISCONSIN/1/57)	378-405								
PVNUC JAZW2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/WISCONSIN/1/61)	378-405								
PVNUC JNCCA	NUCLEOPROTEIN	INFLUENZA C VIRUS (STRAIN CALIFORNIA/78)	99-126	416-443	451-478						
PVNUC MABVM	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN MUSOXE)	366-407								
PVNUC MABVP	NUCLEOPROTEIN	MARBURG VIRUS (STRAIN POPP)	366-407								
PV001 VACCC	PROTEIN O1	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37	109-138	581-608						
PV001 VARY	PROTEIN O1	VARIOLA VIRUS	7-37	109-138	581-608						
PV001 FOMV	152 KD PROTEIN	FOXTAIL MOSAIC VIRUS	1023-1050								
PV001 NAV	186 KD PROTEIN	NARCISSUS MOSAIC VIRUS	996-1023	1527-1561							
PV001 PMV	176 KD PROTEIN	PAPAYA MOSAIC POTEXVIRUS	948-978	1481-1532							
PV001 PYMR	223 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)	597-627								
PV001 PVX	165 KD PROTEIN	POTATO VIRUS X	698-725	1017-1044							
PV001 PVX3	165 KD PROTEIN	POTATO VIRUS X (STRAIN X3)	698-725	1017-1044							
PV001 SMYEA	150 KD PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	312-342	691-721							
PV010 NPVAC	P10 PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYIHDROSIS VIRUS	7-41								
PV010 NPVOP	P10 PROTEIN	ORGOTIA PSEUDOTSUGATA MULTICA/PSID POLYIHDROSIS VIRUS	7-48								
PV010 NPVSE	P10 PROTEIN	SPODOPTERA EXIGUA NUCLEAR POLYIHDROSIS VIRUS (STRAIN US)	6-33	37-64							

PCGENE	1071784	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVP10 RGDV	NONSTRUCTURAL PROTEIN P10	RICE GALL DWARF VIRUS	205-252								
PVP10 WTV	NONSTRUCTURAL PROTEIN P10	WOUND TUMOR VIRUS	151-181	227-254							
PVP11 RDV	NONSTRUCTURAL PROTEIN P11	RICE DWARF VIRUS	53-80								
PVP12 WTV	NONSTRUCTURAL PROTEIN P12	WOUND TUMOR VIRUS	81-108								
PVP18 WTVN	NONSTRUCTURAL PROTEIN P18	WOUND TUMOR VIRUS (STRAIN NI)	81-108								
PVP19 AMCV	CORE PROTEIN P19	ARTICHOKE MOTTLED CRINKLE VIRUS	73-100								
PVP19 TBSVC	CORE PROTEIN P19	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY)	73-100								
PVP23 HSYSA	PROBABLE CAPSID PROTEIN VP23	HERPESVIRUS SAIMIRI (STRAIN 11)	2-29								
PVP26 HSYEB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVP26 HSYSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	48-75								
PVP2 AHV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	277-304	410-437	632-662	907-934					
PVP2 BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	815-846								
PVP2 BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	898-925								
PVP2 BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	119-146								
PVP2 BTV1S	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	72-103	415-453							
PVP2 ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	39-94	523-553							
PVP2 ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	39-94	524-554							
PVP2 ROTBW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (STRAIN WA)	70-101	531-567							
PVP2 ROTPC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	52-99	128-156	518-545	705-746					
PVP2 ROTSI	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	36-96								
PVP30 ASFE1	PHOSPHOPROTEIN P30	AFRICAN SWINE FEVER VIRUS (STRAIN E-75)	39-75								
PVP32 ASFB7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	39-75								
PVP33 EB0V	POLYMERASE COMPLEX PROTEIN VP33	EBOLA VIRUS	83-119								
PVP33 MABVM	POLYMERASE COMPLEX PROTEIN VP33	MARBURG VIRUS (STRAIN MUSKE)	80-107	231-258							
PVP33 MABVP	POLYMERASE COMPLEX PROTEIN VP33	MARBURG VIRUS (STRAIN POPP)	80-107	231-258							
PVP33 NPVAC	EARLY 33 KD PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	270-297								
PVP33 NPVBM	EARLY 33 KD PROTEIN	BOMBYX MORI NUCLEAR POLYHEDROSIS VIRUS	68-102								
PVP33 VACC	IMMUNODOM ENV PRO P33	VACCINIA VIRUS (STRAIN WR)	178-205								
PVP39 NPVAC	MAJOR CAPSID PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	134-161	264-291							
PVP39 NPVOP	MAJOR CAPSID PROTEIN	ORGANIA PSEUDOTUGATA MULTICAPSID POLYHEDROSIS VIRUS	263-290								
PVP39 HSYA	VP1 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	132-159								
PVP1 BTV10	VP1 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	214-252								
PVP1 BTV17	VP1 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	214-252								
PVP1 BTV1A	VP1 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	214-252								
PVP1 EHDV1	VP1 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	209-243	798-832							
PVP3 EHDVA	VP1 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2 / STRAIN AUSTRAL)	798-832								
PVP3 GFLV	P3 PROTEIN	GRAPEVINE FANLEAF VIRUS	99-133								
PVP1 ROTPC	INNER CORE PROTEIN VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	39-66	329-384							
PVP3 ROTSI	INNER CORE PROTEIN VP3	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	26-67	350-377	451-497	619-692					
PVP40 EBV	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	440-470								
PVP40 HSYSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	205-232	344-372							
PVP40 ILTVT	CAPSID PROTEIN P40	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	515-549								
PVP40 VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	174-208	495-522							
PVP41 ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	589-619							
PVP42 ROTSI	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	8-35	584-622							
PVP44 VACC	MAJOR CORE PROTEIN P44 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	48-75								
PVP44 VACC	MAJOR CORE PROTEIN P44 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	48-75								
PVP44 VACC	MAJOR CORE PROTEIN P44 PRECURSOR	VARIOLA VIRUS	48-75								
PVP44 VACC	MAJOR CORE PROTEIN P44 PRECURSOR	FOWLPOX VIRUS	80-110								
PVP48 FOWPV	MAJOR CORE PROTEIN P48 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-37								
PVP48 VACC	MAJOR CORE PROTEIN P48 PRECURSOR	VACCINIA VIRUS (STRAIN WR)	7-37								
PVP48 VACC	MAJOR CORE PROTEIN P48 PRECURSOR	VARIOLA VIRUS	7-37								
PVP48 VACC	MAJOR CORE PROTEIN P48 PRECURSOR	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	34-61	576-603							
PVP4 BTV10	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	34-61	576-603							
PVP4 BTV11	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	34-61	576-603							
PVP4 BTV13	VP4 CORE PROTEIN	NEBRASKA CALIF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	552-622								
PVP4 BTV2A	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	595-629								

PCGENE	1071/1784	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
VP4 ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	8-35	584-622							
VP4 ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	595-629								
VP4 ROTBU	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	112-146	235-269	552-639						
VP4 ROTBH	OUTER CAPSID PROTEIN VP4	ROTAVIRUS (GROUP B / STRAIN IDIR)	5-32								
VP4 ROTGI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	8-35	572-628							
VP4 ROTHI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	8-35	279-306	565-621						
VP4 ROTJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	112-139	584-629						
VP4 ROTK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69M)	8-35	279-306	565-621						
VP4 ROTL	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	8-35	279-306	565-621						
VP4 ROTM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN K4)	8-35	112-138							
VP4 ROTN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	8-35	77-104	279-306	577-621					
VP4 ROTP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	8-35	279-306	565-621						
VP4 ROTQ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	8-35	572-610							
VP4 ROTR	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	8-35	572-628							
VP4 ROTR1	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	8-35	577-621							
VP4 ROTR2	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RV)	8-38	105-135	235-262						
VP4 ROTR3	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	8-35	572-627							
VP4 ROTR4	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	8-35	279-306	590-617						
VP4 ROTR5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	8-35	577-621							
VP4 ROTR6	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 3 / STRAIN OSU)	112-146	584-625							
VP4 ROTR7	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	5-33	115-161	291-320						
VP4 ROTR8	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	8-35	572-628							
VP4 ROTR9	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YM)	8-35	112-146	584-625						
VP4 ROTR10	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	8-38	584-622							
VP4 ROTR11	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-FEM)	8-35	589-619							
VP4 ROTR12	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11-SEM)	8-35	130-157	584-622						
VP4 ROTR13	OUTER CAPSID PROTEIN VP4	WOUND TUMOR VIRUS	28-62								
VP4 ROTR14	OUTER CAPSID PROTEIN VP4	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	113-183	191-218							
VP4 ROTR15	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	53-80	99-126							
VP4 ROTR16	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	53-80	92-126							
VP4 ROTR17	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	53-80								
VP4 ROTR18	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE AUSTRALIA)	53-80	89-126							
VP4 ROTR19	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE SOUTH AFRICA)	53-80	92-126	148-182						
VP4 ROTR20	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	53-80	89-126							
VP4 ROTR21	OUTER CAPSID PROTEIN VP4	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	31-80	191-218	399-426						
VP4 ROTR22	OUTER CAPSID PROTEIN VP4	WOUND TUMOR VIRUS	648-675								
VP4 ROTR23	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	161-193								
VP4 ROTR24	OUTER CAPSID PROTEIN VP4	MAIZE ROUGH DWARF VIRUS	153-202								
VP4 ROTR25	OUTER CAPSID PROTEIN VP4	AUTOGRAHA CALIFORNICA NUCLEAR POLYTHEDROSIS VIRUS	36-63								
VP4 ROTR26	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	157-189								
VP4 ROTR27	OUTER CAPSID PROTEIN VP4	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYTHEDROSIS VIRUS	45-72								
VP4 ROTR28	OUTER CAPSID PROTEIN VP4	AUTOGRAHA CALIFORNICA NUCLEAR POLYTHEDROSIS VIRUS	44-81								
VP4 ROTR29	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	157-189								
VP4 ROTR30	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	157-189								
VP4 ROTR31	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	157-189								
VP4 ROTR32	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE SOUTH AFRICA)	161-193								
VP4 ROTR33	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	133-172								
VP4 ROTR34	OUTER CAPSID PROTEIN VP4	RICE DWARF VIRUS	10-37	354-381							
VP4 ROTR35	OUTER CAPSID PROTEIN VP4	AUTOGRAHA CALIFORNICA NUCLEAR POLYTHEDROSIS VIRUS	413-440								
VP4 ROTR36	OUTER CAPSID PROTEIN VP4	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	929-977							
VP4 ROTR37	OUTER CAPSID PROTEIN VP4	AUTOGRAHA CALIFORNICA NUCLEAR POLYTHEDROSIS VIRUS	44-78	370-397							
VP4 ROTR38	OUTER CAPSID PROTEIN VP4	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	16-43								
VP4 ROTR39	OUTER CAPSID PROTEIN VP4	WOUND TUMOR VIRUS	458-485								
VP4 ROTR40	OUTER CAPSID PROTEIN VP4	AUTOGRAHA CALIFORNICA NUCLEAR POLYTHEDROSIS VIRUS	101-142	240-298							
VP4 ROTR41	OUTER CAPSID PROTEIN VP4	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYTHEDROSIS VIRUS	132-159								
VP4 ROTR42	OUTER CAPSID PROTEIN VP4	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	105-132								
VP4 ROTR43	OUTER CAPSID PROTEIN VP4	FOWLPOX VIRUS	211-238								

PCGENE	1071784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
PVP8_RTV	OUTER CAPSID PROTEIN P8	WOUND TUMOR VIRUS	29-56	112-143							
PVP9_RDV	NONSTRUCTURAL PROTEIN P9	RICE DWARF VIRUS	197-224								
PVP9_WTV	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS	22-49								
PVP9_WTVN1	STRUCTURAL PROTEIN P9	WOUND TUMOR VIRUS (STRAIN N1)	22-49								
PVPHE_NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN	AUTOGRAPIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	196-223								
PVPHE_NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN	ORGANIA PSEUDOTUGATA MULTICAPSID POLYHEDROSIS VIRUS	127-186	238-265							
PVPT_ADEMI	ENDOPROTEASE	MOUSE ADENOVIRUS TYPE I	167-194								
PVPV_HVIA2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV25F2 ISOLATE)	3-31								
PVPV_HVIB1	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (H101 AND H103 ISOLATES)	5-48								
PVPV_HVIB8	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (B18 ISOLATE)	21-48								
PVPV_HVIBN	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	22-49								
PVPV_HVIBR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ORU ISOLATE)	5-48								
PVPV_HVICA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	3-30								
PVPV_HVIEL	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	6-33								
PVPV_HVIL2	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (H102 ISOLATE)	5-48								
PVPV_HVIL3	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (H1 ISOLATE)	2-29								
PVPV_HVILR	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCSE ISOLATE)	22-49								
PVPV_HVIMA	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	5-32								
PVPV_HVIND	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	6-33								
PVPV_HVIPV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	3-48								
PVPV_HVISI	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49								
PVPV_SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
PVPX_LDV	VFX PROTEIN	LACTATE DEHYDROGENASE-ELEVATING VIRUS	64-94								
PVRNA_BSMV	ALPHA-A PROTEIN	BARLEY STRIPE MOSAIC VIRUS	1051-1078								
PVS06_ROTBS	VPS6 PROTEIN	BOVINE ROTA VIRUS (GROUP C / STRAIN SHINTOKU)	6-43								
PVS06_ROTGA	VPS6 PROTEIN	ROTA VIRUS (GROUP B / STRAIN ADRV)	114-144								
PVS06_ROTGL	VPS6 PROTEIN	ROTA VIRUS (GROUP B / STRAIN DBR)	28-55								
PVS06_ROTTC	VPS6 PROTEIN	HUMAN ROTA VIRUS	9-44								
PVS07_ROTBJ	GLYCOPROTEIN VP7	PORCINE ROTA VIRUS (GROUP C / STRAIN COWDEN)	9-44								
PVS07_ROTBU	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTA VIRUS (STRAIN KN-4)	2-29								
PVS07_ROTFS	NONSTRUCTURAL PROTEIN NCVP3	BOVINE ROTA VIRUS (STRAIN UK)	91-146	199-236							
PVS07_ROTIS	NONSTRUCTURAL PROTEIN NCVP3	PORCINE ROTA VIRUS (SEROTYPE 5 / STRAIN OSU)	91-146	202-236							
PVS08_ROTBU	NONSTRUCTURAL PROTEIN NS2/VP9	SIMIAN 11 ROTA VIRUS (STRAIN SA11)	91-146	199-236							
PVS08_ROTIS	NONSTRUCTURAL PROTEIN NCVP4	BOVINE ROTA VIRUS (STRAIN UK)	164-201								
PVS09_ROTBA	GLYCOPROTEIN VP7	SIMIAN 11 ROTA VIRUS (STRAIN SA11)	164-201	217-251							
PVS09_ROTBS	GLYCOPROTEIN VP7	BOVINE ROTA VIRUS (SEROTYPE 6 / STRAIN B641)	2-29								
PVS09_ROTBU	GLYCOPROTEIN VP7	BOVINE ROTA VIRUS (STRAIN A5)	2-29								
PVS09_ROTGA	GLYCOPROTEIN VP7	BOVINE ROTA VIRUS (STRAIN UK)	2-29								
PVS09_ROTTH	GLYCOPROTEIN VP7	ROTA VIRUS (GROUP B / STRAIN ADRV)	210-237								
PVS09_ROTTHA	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 4 / STRAIN RV-4)	2-29								
PVS09_ROTTHB	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 2 / STRAIN HU5)	2-29								
PVS09_ROTTHD	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE G / STRAIN B37)	2-29								
PVS09_ROTTHH	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 2 / STRAIN DS1)	2-29								
PVS09_ROTTHM	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 2 / STRAIN HN126)	2-29								
PVS09_ROTTHO	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 1 / STRAIN M57)	2-29								
PVS09_ROTTHP	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	2-29								
PVS09_ROTTHS	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 3 / STRAIN P)	2-29								
PVS09_ROTTHW	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 2 / STRAIN S2)	2-29								
PVS09_ROTTHZ	GLYCOPROTEIN VP7	HUMAN ROTA VIRUS (SEROTYPE 1 / STRAIN WA)	2-29								
PVS09_ROTTS1	GLYCOPROTEIN VP7	PORCINE ROTA VIRUS (SEROTYPE 3 / STRAIN A776)	2-29								
PVS09_ROTTS2	GLYCOPROTEIN VP7	PORCINE ROTA VIRUS (SEROTYPE 3 / STRAIN CRW-8)	2-29								
PVS09_ROTTS3	GLYCOPROTEIN VP7	PORCINE ROTA VIRUS (SEROTYPE 3 / STRAIN SA11)	2-29								
PVS10_ROTBS	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTA VIRUS (STRAIN SA11)	2-29								
PVS10_ROTIS1	NONSTRUCTURAL GLYCOPROTEIN NCVP3	BOVINE ROTA VIRUS (GROUP C / STRAIN SHINTOKU)	125-132								
PVS11_ROTBU	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTA VIRUS (STRAIN SA11)	113-140								
PVS11_ROTIS1	MINOR OUTER CAPSID PROTEIN	BOVINE ROTA VIRUS (STRAIN UK)	13-40	114-145							
PVS11_ROTIS2	MINOR OUTER CAPSID PROTEIN	BOVINE ROTA VIRUS (STRAIN VABU)	13-40	114-145							
PVS11_ROTGA	NONSTRUCTURAL PROTEIN	ROTA VIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTA VIRUS)	31-60								

PCGENE	1071784	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	13-40	111-145							
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	13-40	111-145							
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	111-145								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	RABBIT ROTAVIRUS (STRAIN ALABAMA)	111-145								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SIMIAN 11 ROTAVIRUS (STRAIN SALL)	111-146								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS	9-46								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN MATSUJAMA)	12-41								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	9-41								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	9-46								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN JER-YL-1-YN)	9-46								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	9-46								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	9-46								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	12-41								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN RW)	9-41								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MUMPS VIRUS (STRAIN URABE VACCINE AM9)	12-41								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	26-63	71-122	127-168	222-259					
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 2 / STRAIN D3/JONES)	4-104	130-193							
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	4-52	75-104	112-160						
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	350-384								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 2 / STRAIN D3/JONES)	289-316								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 3 / STRAIN DEARING)	90-117								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	REOVIRUS (TYPE 1 / STRAIN LANG)	50-77								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	CAPRIPOX VIRUS (STRAIN INS-1)	124-158								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	250-277								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	417-451								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	HUMAN CYTOMEGALOVIRUS (TYPE 6 / STRAIN UGANDA-1102)	176-203								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	ICTALURID HERPESVIRUS 1	710-737								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	394-421								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN VT1)	169-196								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	169-196								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIIBA)	4-38								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	25-65								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	4-61								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	30-78								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	TORACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA)	51-87								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	85-112								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	59-86								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	5-39								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	80-107								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	77-111								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	9-36	119-153							
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MAIZE STREAK VIRUS (NIGERIAN ISOLATE)	34-61								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE)	34-61								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	76-103								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	93-164								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	118-148								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	24-97								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	233-267								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	133-184								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-149								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	81-121	546-573	658-700						
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	13-40								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	74-108	152-179	184-218						
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	62-89								
PVS11_ROT45	MINOR OUTER CAPSID PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	162-197	214-241							

PCGENE	107a178x4	All Viruses (no Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PYB12_FOWPM	HYPOTHETICAL BAMHI-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	11-38								
PYB13_FOWPM	HYPOTHETICAL BAMHI-ORF13 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	128-167								
PYB13_FOAMV	BEL-3 PROTEIN	HUMAN SPUMARETROVIRUS	87-116								
PYDH1_HSV57	HYPOTH 24.1 KD IN DIFR 3 REGION	HERPESVIRUS SAIMIRI (STRAIN 484-77)	161-188								
PYDH1_HSV5C	HYPOTH 28.7 KD IN DIFR 3 REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	52-82								
PYDH4_HSV5C	HYPOTH 9.9 KD IN DIFR 3 REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PYF25_FOWP1	HYPOTHETICAL 33.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FF-1)	8-35								
PYF30_FOWP1	HYPOTHETICAL 30.9 KD PROTEIN	FOWLPOX VIRUS (STRAIN FF-1)	170-204								
PYH22_VACCV	HYPOTH 21.7 KD HINDIII-C PRO	VACCINIA VIRUS (STRAIN WR)	37-64	95-126	144-171						
PYH33_VACCV	HYPOTH HOST RANGE 27.4 KD PRO	VACCINIA VIRUS (STRAIN WR)	31-58	179-206							
PYK82_EBV	HYPOTHETICAL BKR2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYK84_EBV	HYPOTHETICAL BKR4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYL15_ADE41	HYPOTH 12.4 KD IN 33 KD REGION	HUMAN ADENOVIRUS TYPE 41	47-86								
PYLR3_EBV	HYPOTHETICAL BLR3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-54								
PYOR1_COYAV	HYPOTHETICAL 23 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	94-143								
PYOR2_COYAV	HYPOTHETICAL 13 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	35-76								
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	64-94								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	65-95								
PYOR3_ADEG1	HYPOTHETICAL 31.5 KD PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS)	92-119								
PYOR4_TTV1	HYPOTHETICAL 8.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	23-57								
PYORL_TTV1	HYPOTHETICAL 26.9 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	15-42								
PYORQ_TTV1	HYPOTHETICAL 7.3 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	3-31								
PYORW_TTV1	HYPOTHETICAL 12.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	4-40								
PYPI2_RTBV	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	44-71								
PYPI2_RTBVP	HYPOTHETICAL P12 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	44-71								
PY24_RTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	59-101	106-157							
PY24_RTBVP	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	51-101	106-157							
PY246_RTBV	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	58-107	197-231							
PY246_RTBVP	HYPOTHETICAL P46 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	58-107	197-231							
PY263_NPVAC	HYPOTH PRO P6.5 REGION	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	44-71								
PY263_NPVOP	HYPOTH 40.0 KD IN P6.5 REGION	ARGYIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	325-352								
PY26H_NPVAC	HYPOTH 21.6 KD IN POLYHEDRIN 5 REGION	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	116-153								
PY26L_IPNVN	HYPOTHETICAL 17.0 KD PROTEIN	INFECTIOUS PANCREATIC NECROSIS VIRUS (STRAIN NI)	5-32								
PYQ3_AMEPV	HYPOTHETICAL PROTEIN IN TK 3 REGION	AMSACTA MOOREI ENTOMOPHOXVIRUS	8-57	59-96	156-183						
PYR31_HSV6G	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	208-235								
PYR32_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	223-257	268-299							
PYR33_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	141-168								
PYR34_HSV6G	HYPOTHETICAL PROTEIN RF4	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	404-441								
PYR2_IRV6	REPETITIVE PROTEIN ORF2	CHILLO INDIENSCENT VIRUS	10-45								
PYVAG_VACCV	HYPOTHETICAL 9.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-34								
PYVAH_VACCV	HYPOTHETICAL 14.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-112								
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-77								
PYVDB_VACCV	HYPOTHETICAL 8.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	46-77								
PYVDH_VACCV	HYPOTHETICAL 7.2 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	20-50								
PYVGB_VACCV	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	10-44								
PY2L2_EBV	HYPOTHETICAL B2L2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	152-179								

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TABLE VII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

(PREFERRED VIRAL SEQUENCES)

PCGENE	1071784	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
POL MLVAK	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	453-480								
PENV MLVAV	ENV POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	517-544								
POL MLVAV	POL POLYPROTEIN	AKV MURINE LEUKEMIA VIRUS	805-832								
PMYC A VMQ	MYC TRANSFORMING PROTEIN	AVIAN MYELOCTOMATOSIS VIRUS CMII	375-402								
PMYC A VMQ	MYC TRANSFORMING PROTEIN	AVIAN MYELOCTOMATOSIS VIRUS HBI	232-266								
PMYC A VMQ	MYC TRANSFORMING PROTEIN	AVIAN MYELOCTOMATOSIS VIRUS MC29	232-267								
VLI FVPL	PROBABLE LI PROTEIN	AVIAN PAPILLOMAVIRUS FV-1	376-403								
PVGLB HSVB1	GLYCOPROTEIN I PRECURSOR	BOVINE HERPESVIRUS TYPE 1	38-65								
PRB3 HSVB3	RIBONUC-DIPHOSPH REDUCT SMALL CHA	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	427-454								
PVGLB HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	90-117								
PENV BIVM6	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 06)	447-474								
PENV BIV27	ENV POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	17-44	544-603	631-695						
PENV BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	17-44	573-632	660-724						
PENV BLVAU	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE VDM)	304-377								
PENV BLVB2	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB33)	304-377								
PENV BLVB3	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB39)	304-377								
PENV BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	304-377								
PRBPA PIBB	HEMAGGLUTININ-NEURAMINIDASE	BOVINE PARAINFLUENZA 3 VIRUS	66-93								
PRBPP PIBB	RNA POLYMERASE ALPHA SUBUNIT	BOVINE PARAINFLUENZA 3 VIRUS	34-91	255-282	285-314						
PVGLF PIBB	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	115-182	207-241	459-497						
PVMA2 PIBB	MATRIX PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	201-231								
PRBP BRSVA	RNA POLYMERASE ALPHA SUBUNIT	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN AS1908)	99-133								
PVGLF BRSVA	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN AS1908)	38-65	154-202	216-243	442-469	486-531				
PVMA2 BRSVA	MATRIX GLYCOPROTEIN M2	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN AS1908)	124-152								
PVMA2 BRSVA	MATRIX PROTEIN	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN AS1908)	219-246								
PVGLF BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	38-65	154-202	216-243	444-471	488-533				
PVGLG BRSVC	MAJOR SURFACE GLYCOPROTEIN G	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	92-123								
PVGLF BRSVC	FUSION GLYCOPROTEIN PRECURSOR	BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	38-65	154-202	216-243	444-471	488-533				
PENV MLVCB	ENV POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	310-339								
PENV SIVCZ	ENV POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	160-187	253-289	316-366	526-584	627-654				
PVU SIVCZ	VPU PROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	51-78								
POL SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIVCP2)	242-269								
PVEZ CRPVK	PROBABLE E2 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	331-383								
VLI CRPVK	PROBABLE L1 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	1858-1885	2890-2935	2982-3016	3117-3147					
POLG DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE 572590)	1544-1571	1858-1885	2485-2519	2908-2935	2982-3016	3117-3147			
POLG DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	1544-1571	1858-1885	2485-2519	2908-2935	2982-3016	3117-3147			
POLG DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK53)	1544-1571	1858-1885	2485-2519	2908-2935	2982-3016	3117-3147			
POLG DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	1544-1571	1858-1885	2485-2519	2908-2935	2982-3016	3117-3147			
POLG DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN PR159/51)	1134-1161	1448-1475							
POLG DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	837-864	1542-1569	1857-1884	2494-2521	2980-3014	3345-3372			
POLG DEN3	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 3	2885-2930	2977-3011	3342-3369						
POLG DEN4	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 4									
PDPOL HPBDB	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	5-39								
PDPOL HPBDC	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	5-39								
PDPOL HPBDW	DNA POLYMERASE	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	5-39	304-331							
PTGOU EBV	LARGE TEGUMENT PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	145-172	1215-1242	1344-1371	1876-1903					
PUL06 EBV	USING PROTEIN BBRF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	115-142	313-340	542-569						
PUL11 EBV	HYPOHETICAL PROTEIN BBLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	15-42								
PUL32 EBV	PROB DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	185-212								
PUL37 EBV	HYPOHETICAL PROTEIN B(CRF1)	EPSTEIN-BARR VIRUS (STRAIN B95-8)	409-436								
PUL92 EBV	HYPOHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8)	107-144	168-196							
PVCAP EBV	MAJOR CAPSID PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	847-874								
PVGL2 EBV	PROBABLE MEMBRANE GLYCOPROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	68-102								
PVGLB EBV	GLYCOPROTEIN GP110 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	95-122	631-658							
PVGLH EBV	GLYCOPROTEIN GP85 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	549-576	619-648							
PVGP8 EBV	PROBABLE MEMBRANE ANTIGEN GP85	EPSTEIN-BARR VIRUS (STRAIN B95-8)	104-149								

PCGENE	1071178a.4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PV740_EBV	PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	400-470								
PV740_EBV	CAPSID DNA PACKAGING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	234-290								
PYKX2_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	90-121								
PYKX4_EBV	HYPOTHETICAL BKRF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	19-53								
PYLK3_EBV	HYPOTHETICAL BLRF3 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	27-34								
PYL22_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	152-179								
PBZLF_EBV	BZLF1 TRANS-ACTIVATOR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	193-220								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	977-1004	1041-1068							
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	55-82								
PLMP1_EBV	LATENT MEMBRANE PROTEIN I	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-175								
PLMP2_EBV	GENE TERMINAL PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	294-321								
PLMP1_EBVC	LATENT MEMBRANE PROTEIN I	EPSTEIN-BARR VIRUS (STRAIN CAO)	148-175								
PLMP1_EBVR	LATENT MEMBRANE PROTEIN I	EPSTEIN-BARR VIRUS (STRAIN RAJ1)	148-175								
PUL31_HSVB	MAJOR ENVELOPE GLYCOPROTEIN 100	EQUINE HERPESVIRUS TYPE 1	345-375								
PVGLC_HSVB	GLYCOPROTEIN C PRECURSOR	EQUINE HERPESVIRUS TYPE 1	124-151								
PVGLB_HSV1	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS35A)	443-470	914-961							
PVGLB_HSV6A	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB1)	443-470	914-961							
PAT12_HSVB	ALPHA TRANS-IND FACTOR 12 KD PRO	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	294-321								
PAT1N_HSVB	ALPHA TRANS-IND PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	255-289								
PHL1_HSVB	PROBABLE HELICASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	184-211	321-348							
PR1R1_HSVB	RIBONUC-DIPHOSPH REDUCT LARGE CHA	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	75-102								
PTEGU_HSVB	LARGE TEGUMENT PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	229-256	566-593	1205-1232						
PUL06_HSVB	VIRION GENE 56 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	640-667								
PUL14_HSVB	HYPOTHETICAL GENE 48 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	247-286								
PUL21_HSVB	GENE 40 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	44-71								
PUL37_HSVB	GENE 31 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	715-749	987-1014							
PUL52_HSVB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	193-220	943-970							
PVGO0_HSVB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	146-176								
PVGLB_HSVB	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	443-470	914-961							
PVGLG_HSVB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	383-410								
VMP_HSVB	PROB INTEGRAL MEMBRANE PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	147-174								
PV26_HSVB	CAPSID PROTEIN VP26	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	36-63								
PVGO3_HSVB	GENE 3 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	146-176								
PVGLB_HSVL	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY D)	443-470	913-960							
PCELF_HSVB	CELL FUSION PROTEIN PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAINS AB4P and Ky A)	312-339								
PUL47_HSV6A	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	190-217								
PVGLB_HSV6A	GLYCOPROTEIN B PRECURSOR	EQUINE HERPESVIRUS TYPE 4	486-513	616-643							
PVGLG_HSV6A	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 4	271-298								
PDUT_HSV6A	DEOXYT 5'-TRIPHOSPH NUCLEOTIDASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	90-117								
PVE1_PAPVE	PROBABLE E2 PROTEIN	EUROPEAN ELK PAPILLOMAVIRUS	120-150								
PENV_FIVE	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	650-680	722-749							
PPOL_FIVE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PETALUMA)	442-473								
PENV_FIVSD	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	639-668	720-747							
PENV_FIVT2	ENV POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TM2)	640-679	721-748							
PENV_FIVC6	ENV POLYPROTEIN	FELINE LEUKEMIA PROVIRUS (CLONE CFE-6)	509-538								
PMYC_FLVTT	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA PROVIRUS FTT	393-420								
PMYC_FLV	MYC TRANSFORMING PROTEIN	FELINE LEUKEMIA VIRUS	391-420								
PENV_FLVGL	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	490-519								
PENV_FLVLB	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	510-539								
PENV_FLVSA	ENV POLYPROTEIN	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	487-516								
PENV_FLVFS	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	523-553								
PENV_MLVTF	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	523-553								
PENV_MLVFP	ENV POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	523-553								
PENV_GALV	ENV POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	176-203	523-564							
PGAG_GALV	GAG POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	396-442	447-474							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	535-562	676-703							
PPOL_HPBG5	DNA POLYMERASE	GROUND SQUIRREL HEPATITIS VIRUS	271-325								

PCGENE	10717844	All Viruses (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	VIRUS									
DPOL_HSVSA	DNA POLYMERASE	HERPESVIRUS SAIMIRI (STRAIN 11)	635-652								
PDU1_HSVSA	DEOXYU 5'-TRIPHOSPH NUCOTIDYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	179-213								
PHL1_HSVSA	PROBABLE HELICASE	HERPESVIRUS SAIMIRI (STRAIN 11)	418-449								
PIC18_HSVSA	PROBABLE PROC & TRANSPORT PRO	HERPESVIRUS SAIMIRI (STRAIN 11)	58-85	482-522							
PIE68_HSVSA	IMMEDIATE-EARLY PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	48-78								
PK1TH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	340-386								
PR1R1_HSVSA	RIBONUC-DIPHOSPH REDUCT LARG CHA	HERPESVIRUS SAIMIRI (STRAIN 11)	324-351								
PTEGU_HSVSA	PROBABLE LARG TEGUMENT PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	524-607	672-700			846-898	949-986	990-1017	1467-1497	2102-2115
PTYSY_HSVSA	THYMIDYLATE SYNTHASE	HERPESVIRUS SAIMIRI (STRAIN 11)	120-147								
PUL06_HSVSA	VIRION GENE 41 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	15-42	302-358							
PUL23_HSVSA	VIRION GENE 19 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	34-61	204-231							
PUL14_HSVSA	GENE 67 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	208-235								
PUL37_HSVSA	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	31-65	685-737							
PUL32_HSVSA	PROB DNA REP GENE 36 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-157								
PUL73_HSVSA	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	9-36								
PUL47_HSVSA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	582-609								
PUL92_HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	92-122								
PONG_HSVSA	URACIL-DNA GLYCOSYLASE	HERPESVIRUS SAIMIRI (STRAIN 11)	135-176								
PVCAP_HSVSA	MAJOR CAPSID PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	769-799								
PVG45_HSVSA	HYPOTHETICAL GENE 43 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	138-165								
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	360-394								
PVG32_HSVSA	HYPOTHETICAL GENE 52 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	47-74								
PVG14_HSVSA	GLYCOPROTEIN H PRECURSOR	HERPESVIRUS SAIMIRI (STRAIN 11)	388-415								
VMP_HSVSA	INTEGRAL MEMBRANE PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	80-107								
PV723_HSVSA	PROBABLE CAPSID PROTEIN VP73	HERPESVIRUS SAIMIRI (STRAIN 11)	2-29								
PV726_HSVSA	CAPSID PROTEIN VP26	HERPESVIRUS SAIMIRI (STRAIN 11)	48-75								
PV740_HSVSA	CAPSID PROTEIN P40	HERPESVIRUS SAIMIRI (STRAIN 11)	205-232	344-372							
PV775_HSVSA	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	181-208	928-977							
PONB1_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	333-368	512-539							
PCGH2_HSVSA	CYCLIN HOMOLOG	HERPESVIRUS SAIMIRI (STRAIN 11)	127-154								
PYDH1_HSVSA	HYPOTH 24.1 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 484-77)	161-188								
PYDH1_HSVSA	HYPOTH 28.7 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	52-82								
PYDH4_HSVSA	HYPOTH 9.9 KD IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	53-83								
PENV_MLVHO	ENV POLYPROTEIN	HOMULV MURINE LEUKEMIA VIRUS	510-540								
DPOL_HCMVA	DNA POLYMERASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	753-780								
PIC18_HCMVA	PROB PROC & TRANSPORT PRO UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	294-324								
PIR03_HCMVA	HYPOTHETICAL PROTEIN IRL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	22-49								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL12	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-162								
PIR13_HCMVA	HYPOTHETICAL PROTEIN IRL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	31-62								
PRU1_HCMVA	RIBONUC-DIPHOSPH REDUCT LARG CHA	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	622-649								
PTEGU_HCMVA	PROBABLE LARG TEGUMENT PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	1251-1281	2202-2239							
PUL08_HCMVA	HYPOTHETICAL PROTEIN UL8	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	6-47								
PUL13_HCMVA	HYPOTHETICAL PROTEIN UL13	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	347-374								
PUL16_HCMVA	HYPOTHETICAL PROTEIN UL16	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-112								
PUL20_HCMVA	HYPOTH PRO UL20 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	34-61								
PUL31_HCMVA	HYPOTHETICAL PROTEIN UL31	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	167-194	254-284							
PUL33_HCMVA	HYPOTHETICAL PROTEIN UL33	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-562								
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	114-148	448-485	763-790	802-853					
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	159-186								
PUL59_HCMVA	HYPOTHETICAL PROTEIN UL59	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	74-101								
PUL70_HCMVA	PROB DNA REP PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-92								
PUL73_HCMVA	UL73 GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	5-73								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	45-79								
PUL93_HCMVA	PROTEIN UL93	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	26-53	314-381							
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	37-71								
PUL44_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	4-31	443-477							
PUL89_HCMVA	HYPOTHETICAL PROTEIN UL119	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	33-78								

PCGENE	107178.4	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
POL_HV10Y	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OY1 ISOLATE)	218-245	620-661							
PENV_HV10Y	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	545-594	631-683	791-818						
POL_HV1PV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	230-257	637-673							
PVPU_HV1PV	VPU PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	5-48								
PENV_HV1RH	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (R/RHAT ISOLATE)	280-307	351-378	554-602	800-832					
POL_HV1RH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (R/RHAT ISOLATE)	217-244	619-660							
VIF_HV1RH	POL INFECTIVITY FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (R/RHAT ISOLATE)	62-89								
PENV_HV1SC	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	338-365	345-593	631-683						
PENV_HV1S1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	333-363	356-585	622-674	782-809					
PVPU_HV1S1	VPV PROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	22-49								
PENV_HV1S3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	541-589	627-679	787-815						
PENV_HV1KB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KB-1-GP32)	274-301	555-596	637-677	776-824					
POL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMIJ ISOLATE)	338-365	345-593	631-683	791-818					
PENV_HV1W1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMIJ ISOLATE)	334-361	356-584	622-674	782-809					
PENV_HV1W2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (WMIJ ISOLATE)	266-307	342-591	634-678	797-828					
PENV_HV1Z2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLATE)	255-296	342-591	628-680	790-820					
POL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLATE)	217-244	619-660							
PENV_HV1Z3	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIKE 3 ISOLATE)	251-292								
PENV_HV1Z6	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIKE 6 ISOLATE)	256-297	345-593	630-682	792-832					
PENV_HV1Z8	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIKE 6 ISOLATE)	86-124	627-666	791-823						
PENV_HV2BE	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	61-88	532-591	621-648	653-697					
PGAG_HV2BE	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	88-115								
POL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	491-582								
PENV_HV2CA	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	534-593	623-650	655-699						
POL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	471-562								
PENV_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	61-88	523-550	555-582	644-688					
PGAG_HV2D1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	88-115								
POL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	509-600								
POL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D203, 7)	60-87	524-551	556-583	613-640	645-693				
PENV_HV2D1	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	471-562								
POL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	61-88	524-551	556-583	613-640	662-689				
PGAG_HV2N2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	88-115								
POL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	471-539								
PENV_HV2R0	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	58-85	533-592	622-698						
POL_HV2R0	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	472-563								
PENV_HV2SB	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	557-584	614-673							
POL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	473-562								
PENV_HV2ST	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	442-476	527-554	559-586	648-692					
PGAG_HV2ST	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	88-115								
POL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	491-582								
PENV_HV2S2	ENV POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST24 IC#2)	442-476	527-554	559-586	648-682					
PVE4_HPV11	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	81-108								
PVE3A_HPV11	PROBABLE E3A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	30-60								
PVE2_HPV13	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	157-184	334-361							
PVE2_HPV16	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	61-105	312-342							
PVE4_HPV16	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 16	66-93								
PVE1_HPV18	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	60-87								
PVE2_HPV18	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	313-340								
PVE4_HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	59-86								
PVE6_HPV18	E6 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	75-102								
VL1_HPV18	PROBABLE L1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	183-210								
PVE2_HPV1A	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	159-186								
VL2_HPV1A	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1A	407-445								
PVE1_HPV2A	E1 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 2A	21-48								

PCGENE	10711784	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLF_P1H4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	115-182	207-241	457-497						
PVMA2_P1H4	MATRIX PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	201-231								
PVASC_P1H4	NONSTRUCTURAL PROTEIN C	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	58-99								
PHEMA_P1H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHEMA_P1H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHEMA_P1H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHEMA_P1H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PHEMA_P1H4	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	27-61								
PRRPP_P1H4	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PVV_P1H4	V PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	4-38								
PRRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	99-141								
PNCAP_HRSV	NUCLEOCAPSID PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	4-31								
PRRPP_HRSV	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	103-192								
PRRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	99-141								
PVGLF_HRSV	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	38-65								
PVMA2_HRSV	MATRIX GLYCOPROTEIN A2	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	124-151								
PVMA2_HRSV	MATRIX PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	219-246								
PVGLG_HRSV	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN R5B3557)	66-107								
PVGLG_HRSV	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN R5B6190)	243-273								
PRRPP_HRSV	RNA POLYMERASE ALPHA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN R5B-2)	38-65								
PVGLG_HRSV	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	99-141								
PVGLG_HRSV	FUSION GLYCOPROTEIN PRECURSOR	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LONG)	38-65								
PVGLG_HRSV	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	4-31								
PVGLG_HRSV	MAJOR SURFACE GLYCOPROTEIN G	HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 18537)	38-65								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	66-93								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	342-376								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (ISOLATE MT-2)	674-712								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	342-376								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	674-712								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	336-370								
PENY_HTLIC	ENT POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	328-366								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	491-518								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	71-98								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	177-204								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	174-208								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	373-400								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	31-58								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	253-290								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	95-122								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	442-469								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	651-678								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	142-169								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	34-61								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	582-609								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	550-584								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	477-504								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	1213-1253								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	362-406								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	1342-1369								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	261-288								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	447-481								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	388-422								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	200-227								
PENY_HTLIC	ENT POLYPROTEIN	ICTALURID HERPESVIRUS I	710-737								

PCGENE	1071784	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PENY_MLVK1	ENV POLYPROTEIN	KIRSTEN MURINE LEUKEMIA VIRUS	40-81								
PVGLB_HSVMD	GLYCOPROTEIN B PRECURSOR	MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)		352-379							
PENY_MCF3	ENV POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	473-512								
PENY_MLVMO	ENV POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	488-515								
PONBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	584-618								
PIC18_MCMVS	PROB PROC & TRANSPORT PRO	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	661-691								
PVGLB_MCMVS	GLYCOPROTEIN B PRECURSOR	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	381-408	441-475							
VIE1_MCMVS	IMMEDIATE-EARLY PROTEIN 1	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	261-288								
PVE2_PCPV1	E2 PROTEIN	PYGMAY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	267-294	327-361							
PVE5_PCPV1	PROBABLE E5 PROTEIN	PYGMAY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	35-62								
PENY_MLVRD	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	497-538								
PPOL_MLVRD	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	716-743	802-832							
PENY_MLVRK	ENV POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	497-538								
PPOL_MLVRK	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	101-128	190-217							
PONBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	435-462	532-559							
PPOLG_HPAYS	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN AGN-47)	207-241	1025-1052	1115-1192						
PPOLG_HPVT	GENOME POLYPROTEIN	SIMIAN HEPATITIS A VIRUS (STRAIN CY-145)	203-237								
PENY_SIVA1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM135 ISOLATE)	269-310	561-588	592-619	652-679	697-724				
PPOL_SIVA2	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM135 ISOLATE)	431-458	547-574	637-671						
PENY_SIVAG	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM286 ISOLATE)	45-72								
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	270-301	566-593	597-624	658-685	703-730				
PPOL_SIVA3	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	436-463	482-516	642-669						
PENY_SIVS4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	71-98								
PGAG_SIVS4	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F216/SMH4 ISOLATE)	281-308	553-612	642-669	691-718					
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F216/SMH4 ISOLATE)	88-115								
PENY_SIVA1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F216/SMH4 ISOLATE)	496-523								
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM1/CLONE GRU-1)	257-291	336-372	548-603	634-708					
PGAG_SIVA1	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM1/CLONE GRU-1)	473-507								
PNEI_SIVA1	NEGATIVE FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRU-1)	96-137								
PPOL_SIVA1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7/CLONE GRU-1)	478-515								
VIF_SIVA1	VIRION INFECTIVITY FACTOR	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM1/CLONE GRU-1)	2-36								
PENY_SIVGB	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GBI)	8-35	158-185	589-650	784-816					
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GBI)	227-254	636-670							
PENY_SIVMK	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (KAW ISOLATE)	553-608								
PGAG_SIVMK	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (KAW ISOLATE)	88-115								
PPOL_SIVMK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (KAW ISOLATE)	531-560								
PENY_SIVML	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	549-608								
PENY_SIVM1	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (NM142-83 ISOLATE)	120-150	530-609	671-715						
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (NM142-83 ISOLATE)	533-560								
PENY_SIVM2	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (NM142-83 ISOLATE)	156-215	277-289							
PENY_SIVSP	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (NM231 ISOLATE)	286-313	554-595	646-722						
PGAG_SIVSP	GAG POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PB1/BC11 ISOLATE)	88-115								
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PB1/BC11 ISOLATE)	499-526								
PENY_SIVM4	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (STM ISOLATE)	88-115								
PPOL_SIVM4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	3-30	288-298	590-617	651-678					
PENY_SIVAT	ENV POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	657-691								
PREV_SIVAT	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	41-68								
PENY_MPMV	ENV POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	422-470								
PPOL_MPMV	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	574-612	670-697							
PGAG_MPMV	GAG POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS (MPMV)	222-260								
PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	109-139								
PHLI_VZVD	PROBABLE HELICASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	490-517	701-728							
PRRI_VZVD	RIBONUC-DIPHOSPH REDUCT LARG CHA	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	119-146								
PTGU_VZVD	LARGE TEGUMENT PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	1121-1158	1579-1609							
PUL14_VZVD	HYPOTHETICAL GENE 46 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	64-101								
PUL21_VZVD	GENE 38 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	380-407								

PCGENE	1071784	All Viruses (no bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS									
PUL34_VZVD	VIRION GENE 24 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	112-139								
PUL37_VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	107-134	485-512	719-746	976-1003					
PUL41_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	330-364								
PUL43_VZVD	GENE 13 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	129-156	312-349							
PUL52_VZVD	PROB DNA REP GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	301-337								
PVGLC_VZVD	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	295-322								
PVP40_VZVD	CAPSID PROTEIN P40	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	174-208	495-522							
PVTER_VZVD	PROBABLE DNA PACKAGING PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	394-421								
PVGLC_WHVS	GLYCOPROTEIN GPV	VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	295-322								
PDPOL_WHV1	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 1	285-326								
PDPOL_WHV39	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 39	290-331								
PDPOL_WHV7	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 7	212-242	290-331							
PDPOL_WHV8	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	211-241	289-330							
PDPOL_WHV81	DNA POLYMERASE	WOODCHUCK HEPATITIS VIRUS 8	212-242	290-331							

TABLE VIII

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL PROCARYOTIC PROTEINS

PCGENE	107:17s:4	Prokaryotic Sequences	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN											
P120K_RICRI	120 KD SURFACE-EXPOSED PROTEIN		RICKETTSIA RICKETTSII	83-110	240-298	355-382	638-672	746-838	1168-1202			
P17K_RICRY	17 KD ANTIGEN PRECURSOR		RICKETTSIA TYPHI	67-94								
P190K_RICRI	190 KD ANTIGEN PRECURSOR (CELL SURFACE)		RICKETTSIA RICKETTSII	241-268	460-487	607-634	754-781	829-856	904-931	1220-1254	1544-1571	1723-1750
P22KD_DESMO	22.6 KD PROTEIN		DESULFOCOCCUS MOBILIS	2065-2096	2131-2168							
P40KD_VIBAN	40 KD PROTEIN PRECURSOR		VIBRIO ANGUILLARUM	25-52	59-89	120-147						
P60IM_ECOLI	60 KD INNER-MEMBRANE PROTEIN		ESCHERICHIA COLI	511-538								
P60IM_PROMI	60 KD INNER-MEMBRANE PROTEIN		PROTEUS MIRABILIS	14-41								
P65KD_ZYMMO	65 KD PROTEIN		ZYMMONAS MOBILIS	95-122	444-524							
P6PGD_BACSU	PROB 6-PHOSPHOGLUCONATE DEHYDROGENASE		BACILLUS SUBTILIS	24-51	218-246							
P6PGD_ECOLI	6-PHOSPHOGLUCONATE DEHYDROGENASE		ESCHERICHIA COLI	205-232								
P6PGD_SALTY	6-PHOSPHOGLUCONATE DEHYDROGENASE		SALMONELLA TYPHIMURUM	205-232								
PAAAC_STAAB	6-AMINOGLYCOSIDE N-ACETYLTRANSFERASE		STAPHYLOCOCCUS AUREUS	450-477								
PAAT_BACSP	ASPARTATE AMINOTRANSFERASE		BACILLUS SP	146-173	185-212							
PAAT_ECOLI	ASPARTATE AMINOTRANSFERASE		ESCHERICHIA COLI	351-378								
PABC_ECOLI	ABC PROTEIN		ESCHERICHIA COLI	176-203								
PABIC_LAGLA	ABORTIVE PHAGE RESISTANCE PROTEIN ABIC		LACTOCOCCUS LACTIS	85-126	170-204	209-273						
PACCR_AGRU	TRANSCRIPTIONAL REPRESSOR ACRR		AGROBACTERIUM TUMEFACIENS	127-154								
PACFA_ECOLI	ISOCITRATE LYASE		ESCHERICHIA COLI	398-432								
PACON_BACSU	ACONITATE HYDRATASE		BACILLUS SUBTILIS	48-75								
PACON_ECOLI	ACONITATE HYDRATASE		ESCHERICHIA COLI	41-68	613-640							
PACOR_ALCEU	ACEITON CATABOLISM REG PRO		ALCALIGENES EUTROPHUS	85-112								
PACP_ECOLI	ACYL CARRIER PROTEIN		ESCHERICHIA COLI	4-31								
PACRA_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN A PRECURSOR		ESCHERICHIA COLI	213-247								
PACRB_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN B		ESCHERICHIA COLI	520-551								
PACRF_ECOLI	ACRIFLAVIN RESISTANCE PROTEIN F		ESCHERICHIA COLI	512-550	726-753							
PACTI_STRCO	PUTATIVE KETOACYL REDUCTASE		STREPTOMYCES COBLICOLOR	137-184								
PACTA_LISMO	ACTIN-ASSEMBLY INDUCING PROTEIN PRECURSOR		LISTERIA MONOCYTOGENES	237-264	576-603							
PACVS_NOCILA	ACV SYNTHETASE		NOCARDIA LACTAMURANS	3129-3163								
PADAA_BACSU	METHYLTRANSFER-DNA ALKYLTRANSFERASE		BACILLUS SUBTILIS	136-170								
PADDA_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT A		BACILLUS SUBTILIS	398-425	454-481	522-556	1005-1032					
PADDB_BACSU	ATP-DEPENDENT NUCLEASE SUBUNIT B		BACILLUS SUBTILIS	257-284	870-903	943-977						
PADHI_CLOAB	NADPH-DEPENDENT BUTANOL DEHYDROGENASE		CLOSTRIDIUM ACETOBUTYLICUM	284-311								
PADHA_CLOAB	NADPH-DEPENDENT BUTANOL DEHYDROGENASE A		CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHB_CLOAB	NADH-DEPENDENT BUTANOL DEHYDROGENASE B		CLOSTRIDIUM ACETOBUTYLICUM	298-325								
PADHE_CLOAB	ALCOHOL DEHYDROGENASE		CLOSTRIDIUM ACETOBUTYLICUM	633-680	779-806							
PADIE_ECOLI	ALCOHOL DEHYDROGENASE		ESCHERICHIA COLI	271-298								
PADIY_ECOLI	PUTATIVE REGULATORY PROTEIN ADIY		ESCHERICHIA COLI	45-72								
PADPI_MYCOE	140 KD ADHESIN PRECURSOR		MYCOPLASMA GENTALIUM	90-131	697-724	923-950	990-1017	1169-1199	1387-1414			
PADPI_MYCPN	ADHESIN P1 PRECURSOR		MYCOPLASMA PNEUMONIAE	1557-1584								
PADIY_RICPR	ADP-ATP CARRIER PROTEIN		RICKETTSIA PROWAZEKII	276-307								
PAERA_AERHY	AEROLYSIN PRECURSOR		AEROMONAS HYDROPHILA	278-305								
PAGAL_STRMU	ALPHA-GALACTOSIDASE		STREPTOCOCCUS MUTANS	419-483	597-633							
PAGAR_PSEAT	BETA-AGARASE PRECURSOR		PSEUDOMONAS ATLANTICA	26-53								
PAGR_STAAB	ACCESSORY GENE REGULATOR PROTEIN		STAPHYLOCOCCUS AUREUS	129-159	165-192							
PAI1_YEREN	ATTACHING INVAS LOCUS PROTEIN PRECURSOR		YERSINIA ENTEROCOLITICA	19-46								
PAK1H_ECOLI	ASPARTOKINASE I		ESCHERICHIA COLI	3-30	466-493	503-530						
PAK3H_ECOLI	ASPARTOKINASE II		ESCHERICHIA COLI	51-78	608-635							
PAK2_BACSU	ASPARTATE KINASE II ALPHA AND BETA SUBUNITS		BACILLUS SUBTILIS	266-312								
PAK3_CORGL	ASPARTATE KINASE ALPHA AND BETA SUBUNITS		CORYNEBACTERIUM GLUTAMICUM	5-32								
PAIF_ECOLI	FRUCTOSE-BISPHOSPHATE ALDOLASE		ESCHERICHIA COLI	286-316								
PALGB_PSEAE	ALGINATE BIOSYNTHETIC REG PROTEIN ALGB		PSEUDOMONAS AERUGINOSA	160-194								
PALGE_PSEAE	ALGINATE PRODUCTION PROTEIN ALGE PRECURSOR		PSEUDOMONAS AERUGINOSA	349-376								
PALGP_PSEAE	TRANSCRIPTIONAL REGULATORY PROTEIN ALGP		PSEUDOMONAS AERUGINOSA	81-115								
PALKB_PSEOL	ALKANE-1 MONOOXYGENASE		PSEUDOMONAS OLEOVORANS	115-142								
PALKT_PSEOL	RUBREDOXIN-NAD(+) REDUCTASE		PSEUDOMONAS OLEOVORANS	138-172	338-365							
PALB3_ECOLI	ALANINE RACEMASE, CATABOLIC PRECURSOR		ESCHERICHIA COLI	9-36								

PCGENE	10717844	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PALR_BACST	ALANINE RACEMASE	BACILLUS STEAROTHERMOPHILUS	326-353								
PALSR_BACSU	ALS OPERON REGULATORY PROTEIN	BACILLUS SUBTILIS	119-146								
PALYS_BACSP	AUTOLYSIN PRECURSOR	BACILLUS SP	151-187								
PALYS_BACSU	AUTOLYSIN PRECURSOR	BACILLUS SUBTILIS	147-191								
PALYS_STAAU	AUTOLYSIN	STAPHYLOCOCCUS AUREUS	244-271								
PAMA_STRPN	AMA PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	223-264	297-338	446-473						
PAMD_PSECL	AMIDASE	STREPTOCOCCUS PNEUMONIAE	72-99								
PAMIE_STRPN	OLIGOPEPTIDE TRANSPORT PROTEIN AMIE	PSEUDOMONAS CHLOROPHIS	187-214								
PAMPA_ECOLI	AMINOPEPTIDASE A1	ESCHERICHIA COLI	111-138	199-226							
PAMP_C SERMA	BETA-LACTAMASE PRECURSOR	SERRATIA MARCESCENS	231-258								
PAMP1_BICPR	CYTOSOL AMINOPEPTIDASE	RICKETTSIA PROWAZEKII	3-47	72-99							
PAMPN_ECOLI	AMINOPEPTIDASE N	ESCHERICHIA COLI	655-682								
PAMPP_ECOLI	X-PRO AMINOPEPTIDASE	ESCHERICHIA COLI	110-137								
PAMPT1_THBAQ	AMINOPEPTIDASE T	THERMUS AQUATICUS	281-308								
PAMY1_DICTH	ALPHA-AMYLASE 1	DICTYOGLOMUS THERMOPHILUM	507-534								
PAMY2_DICTH	ALPHA-AMYLASE 2	DICTYOGLOMUS THERMOPHILUM	151-178	507-534							
PAMY3_SALTY	CYTOPLASMIC ALPHA-AMYLASE	SALMONELLA TYPHIMURUM	70-104								
PAMY3_DICTH	ALPHA-AMYLASE 3	DICTYOGLOMUS THERMOPHILUM	280-307								
PAMYB_BACCI	BETA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	61-88								
PAMYB_BACPO	BETA-AMYLASE	BACILLUS POLYMYXA	60-87	266-293	1143-1184						
PAMYB_CLOTU	BETA-AMYLASE, THERMOPHILIC PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	269-296	378-405	459-486						
PAMYQ_CLOSP	GLUCOAMYLASE PRECURSOR	CLOSTRIDIUM SP	103-148	480-510							
PAMYM_BACST	MALT-TOGENIC ALPHA-AMYLASE PRECURSOR	BACILLUS STEAROTHERMOPHILUS	426-453								
PAMYR_BAC38	RAW STARCH-DIGESTING AMYLASE	BACILLUS SP	210-237	435-465	615-642						
PAMY1_AERHY	ALPHA-AMYLASE PRECURSOR	AEROMONAS HYDROPHILA	166-193								
PAMY1_ALTHA	ALPHA-AMYLASE PRECURSOR	ALTEROMONAS HALOPLANKTIS	415-453								
PAMY1_BACAM	ALPHA-AMYLASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	102-136								
PAMY1_BACCI	ALPHA-AMYLASE PRECURSOR	BACILLUS CIRCULANS	212-239	437-474							
PAMY1_BACRE	ALPHA-AMYLASE PRECURSOR	BACILLUS MEGATERIUM	61-88	441-482							
PAMY1_BACSU	ALPHA-AMYLASE PRECURSOR	BACILLUS SUBTILIS	165-205	281-308							
PAMY1_BUTFI	ALPHA-AMYLASE PRECURSOR	BUTYRVIBRIO FIBRISOLVENS	377-418	546-573	795-822						
PAMY1_CLOAB	PUTATIVE ALPHA-AMYLASE	CLOSTRIDIUM ACETOBUTYLICUM	283-310								
PAMY1_CLOTU	ALPHA-AMYLASE PRECURSOR	CLOSTRIDIUM THERMOSULFUROGENES	431-468	612-642							
PAMY1_STRLM	ALPHA-AMYLASE PRECURSOR	STREPTOMYCES LIMOSUS	173-200								
PANFA_AZOV1	NITROGEN FIXATION PROTEIN ANFA	AZOTOBACTER VINELANDII	232-259								
PANFD_AZOV1	NITROGENASE IRON-IRON PROTEIN ALPHA CHAIN	AZOTOBACTER VINELANDII	95-122								
PANFK_AZOV1	NITROGENASE IRON-IRON PROTEIN BETA CHAIN	AZOTOBACTER VINELANDII	369-396								
PANGR_VIBAN	ANGR PROTEIN	VIBRIO ANGUILLARUM	93-120	169-203							
PAPCE_FREDI	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSPHON	51-78								
PAPCE_SYNP6	PHYCOBILISOME LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	37-64	585-615							
PAPCE_SYNY4	PHYCOBILISOME 120 KD LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	52-79								
PAPIC_SALTY	ALKYL HYDROPEROXIDE REDUCTASE C12 PROTEIN	SALMONELLA TYPHIMURUM	62-89								
PAP1_ACHLY	PROTEASE I PRECURSOR	ACHROMOBACTER LYTICUS	478-503								
PAPPC_ECOLI	PROBABLE CYTOCHROME OXIDASE SUBUNIT I	ESCHERICHIA COLI	118-148								
PAPRD_PSEAE	ALKALINE PHOSPHATASE SECRETION PROTEIN APRD	PSEUDOMONAS AERUGINOSA	416-450								
PAPRE_PSEAE	ALKALINE PHOSPHATASE SECRETION PROTEIN APRE	PSEUDOMONAS AERUGINOSA	133-193	208-235	247-277						
PAPT_ECOLI	ADENINE PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	121-148								
PAPU1_THEET	ALPHA-AMYLASE-PULLULANASE PRECURSOR	THERMOANEROBACTER ETHANOLICUS	276-303	347-374	936-982	987-1014	1210-1254	1381-1408			
PAPCA_MYCAR	ARGININE DEIMINASE	MYCOPLASMA ARGENTINI	60-87	218-245							
PAPCB_ECOLI	AEROBIC RESPIRATION CONTROL PROTEIN ARCB	ESCHERICHIA COLI	102-150	302-329	399-426						
PAPCD_PSEAE	PROBABLE ARGININE/ORNITHINE ANTIPORTER	PSEUDOMONAS AERUGINOSA	274-301	386-420							
PAPGA_ECOLI	AMINO-ACID ACETYLTRANSFERASE	ESCHERICHIA COLI	82-109								
PAPGT_ECOLI	LYS-ARG-ORN-BINDING PROTEIN (LAO) PRECURSOR	ESCHERICHIA COLI	84-111								
PAPQA_STAAU	PHOSPHOSHOKIMATE 1-CARBOXYNYLTRANSFER	STAPHYLOCOCCUS AUREUS	86-120								
PAPQC_ECOLI	CHORISMATE SYNTHASE	ESCHERICHIA COLI	68-95								
PAPQC_SALTY	CHORISMATE SYNTHASE	SALMONELLA TYPHI	68-95								
PAPQD_BACSU	DEHYDROQUINATE DEHYDRATASE	BACILLUS SUBTILIS	49-76								

PCGENE	1071784	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM									
PAROK_ECOLI	SHIKIMATE KINASE I	ESCHERICHIA COLI	12-46	127-157	266-324						
PARP_STRPY	IGA RECEPTOR PRECURSOR	STREPTOCOCCUS PYOGENES									
PARP_ECOLI	ARP PROTEIN	ESCHERICHIA COLI	255-282								
PARS_ECOLI	ARSENICAL PUMP-DRIVING ATPASE	ESCHERICHIA COLI	201-238								
PARSB_ECOLI	ARSENICAL PUMP MEMBRANE PROTEIN	ESCHERICHIA COLI	291-318								
PARSB_STAAU	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS AUREUS	27-71	295-322							
PARSB_STAXY	ARSENICAL PUMP MEMBRANE PROTEIN	STAPHYLOCOCCUS XYLOSLUS	27-71	295-322							
PARSB_STAAU	ARSENICAL RESIST OPERON REPRESSOR PROTEIN	STAPHYLOCOCCUS AUREUS	56-93								
PART_ECOLI	ARTA PROTEIN	ESCHERICHIA COLI	3-30								
PARTI_ECOLI	TRANSPORT SYSTEM PROTEIN ARTI	ESCHERICHIA COLI	105-132	213-240							
PARTP_ECOLI	TRANSPORT SYSTEM PROTEIN ARTP	ESCHERICHIA COLI	176-206								
PASAI_ENTFA	AGGREGATION SUBSTANCE PRECURSOR	ENTEROCOCCUS FAECALIS	195-254	478-505	799-826	859-896					
PASNA_ECOLI	ASPARTATE-AMMONIA LIGASE	ESCHERICHIA COLI	127-158								
PASND_ECOLI	ASPARAGINE SYNTHETASE II	ESCHERICHIA COLI	440-477								
PASNC_ECOLI	REGULATORY PROTEIN ASNC	ESCHERICHIA COLI	116-141								
PASPA_BACSU	ASPARTATE AMMONIA-LYASE	BACILLUS SUBTILIS	734								
PASPA_ECOLI	ASPARTATE AMMONIA-LYASE	ESCHERICHIA COLI	204-236								
PASPA_SERMA	ASPARTATE AMMONIA-LYASE	SERRATIA MARCESCENS	204-231								
PASPO_BACLI	L-ASPARAGINASE	BACILLUS LICHENIFORMIS	252-288								
PASPO_ERWCH	L-ASPARAGINASE PRECURSOR	ERWINIA CHIRYSANTHEMI	188-218								
PASPO_ACIGL	GLUTAMINASE-ASPARAGINASE	ACINETOBACTER GLUTAMINASIFICANS	46-80								
PASSY_ECOLI	ARGININOSUCCINATE SYNTHASE	ESCHERICHIA COLI	354-381								
PASSY_METBA	ARGININOSUCCINATE SYNTHASE	METHANOSARCINA BARKERI	287-314								
PATPB_STAAU	POTENTIAL ATP-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	41-68	201-245							
PATKA_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE A	ENTEROCOCCUS FAECALIS	41-80	347-374							
PATKB_ENTFA	POTASSIUM/COPPER-TRANSPORTING ATPASE B	ENTEROCOCCUS FAECALIS	280-310	450-477							
PATMB_SALTY	MG(2+) TRANSPORT ATPASE, P-TYPE	SALMONELLA TYPHIMURIUM	503-530								
PATPB_SYNP6	ATP SYNTHASE A CHAIN	SYNECHOCOCCUS SP	233-260								
PATPB_VIBAL	ATP SYNTHASE A CHAIN	VIBRIO ALGINOLYTICUS	11-38								
PATPA_ANASP	ATP SYNTHASE ALPHA CHAIN	ANABAENA SP	9-36	96-130							
PATPA_BAGME	ATP SYNTHASE ALPHA CHAIN	BACILLUS MEGATERIUM	4-36	453-480							
PATPA_ECOLI	ATP SYNTHASE ALPHA CHAIN	ESCHERICHIA COLI	486-513								
PATPA_ENTFA	ATP SYNTHASE ALPHA CHAIN	ENTEROCOCCUS FAECALIS	4-36	484-518							
PATPA_MYCGA	ATP SYNTHASE ALPHA CHAIN	MYCOPLASMA GALLISEPTICUM	362-409								
PATPA_PROMO	ATP SYNTHASE ALPHA CHAIN	PROPIONIGENIUM MODESTUM	6-36								
PATPA_RHORU	ATP SYNTHASE ALPHA CHAIN	RHODOSPIRILLUM RUBRUM	165-200	459-486							
PATPA_SULAC	ATPASE ALPHA CHAIN	SULFOLOBUS ACIDOCALDARIUS	318-345	562-589							
PATPA_SYNPI	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	7-44								
PATPA_SYNP6	ATP SYNTHASE ALPHA CHAIN	SYNECHOCOCCUS SP	8-45	362-389							
PATPA_SYNT3	ATP SYNTHASE ALPHA CHAIN	SYNECHOCYSTIS SP	8-37	454-500							
PATPA_THERP	ATP SYNTHASE ALPHA CHAIN	THERMOPHILIC BACTERIUM PS-3	9-36								
PATPA_VIBAL	ATP SYNTHASE ALPHA CHAIN	VIBRIO ALGINOLYTICUS	464-513								
PATPB_ANASP	ATP SYNTHASE BETA CHAIN	ANABAENA SP	280-307	370-397							
PATPB_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	163-190	358-385							
PATPB_MYCGA	ATP SYNTHASE BETA CHAIN	MYCOPLASMA GALLISEPTICUM	375-402								
PATPB_RHORU	ATP SYNTHASE BETA CHAIN	RHODOSPIRILLUM RUBRUM	359-386								
PATPB_SULAC	ATPASE BETA CHAIN	SULFOLOBUS ACIDOCALDARIUS	164-191								
PATPB_SYNPI	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	381-408								
PATPB_SYNP6	ATP SYNTHASE BETA CHAIN	SYNECHOCOCCUS SP	291-318	381-408							
PATPB_SYNT3	ATP SYNTHASE BETA CHAIN	SYNECHOCYSTIS SP	381-408								
PATPD_BACFI	ATP SYNTHASE DELTA CHAIN	BACILLUS FIRMUS	109-139	143-170							
PATPD_BAGME	ATP SYNTHASE DELTA CHAIN	BACILLUS MEGATERIUM	63-90	133-160							
PATPD_ENTFA	ATP SYNTHASE DELTA CHAIN	ENTEROCOCCUS FAECALIS	132-159								
PATPD_PROMO	ATP SYNTHASE DELTA CHAIN	PROPIONIGENIUM MODESTUM	14-41								
PATPD_RHOBIL	ATP SYNTHASE DELTA CHAIN	RHODOPSEUDOMONAS BLASTICA	79-116	118-149							
PATPD_RHORU	ATP SYNTHASE DELTA CHAIN	RHODOSPIRILLUM RUBRUM	125-152								
			119-146								

PCGENE	10711764	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM									
PATPD_SYN1	ATP SYNTHASE DELTA CHAIN	SYNECHOCOCCUS SP	100-127								
PATPD_SYN3	ATP SYNTHASE DELTA CHAIN	SYNECHOCOCCUS SP	113-147								
PATPD_VIBAL	ATP SYNTHASE DELTA CHAIN	VIBRIO ALGINOLYTICUS	110-137								
PATPE_BACFI	ATP SYNTHASE EPSILON CHAIN	BACILLUS FIRMUS	53-80								
PATPE_MYCGA	ATP SYNTHASE EPSILON CHAIN	MYCOPLASMA GALLISEPTICUM	99-126								
PATPE_PROMO	ATP SYNTHASE EPSILON CHAIN	PROPIONIGENTUM MODESTUM	100-127								
PATPE_SYN1	ATP SYNTHASE EPSILON CHAIN	SYNECHOCOCCUS SP	72-106								
PATPE_ANASP	ATP SYNTHASE B CHAIN	ANABAENA SP	17-44	51-78	137-164						
PATPE_BACFI	ATP SYNTHASE B CHAIN	BACILLUS FIRMUS	110-151								
PATPE_BACME	ATP SYNTHASE B CHAIN	BACILLUS MEGATERIUM	55-85	122-170							
PATPE_MYCGA	ATP SYNTHASE B CHAIN	MYCOPLASMA GALLISEPTICUM	82-135	170-197							
PATPE_SYN1	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	15-49	111-159							
PATPE_SYN6	ATP SYNTHASE B CHAIN	SYNECHOCOCCUS SP	12-39	128-155							
PATPE_THEP3	ATP SYNTHASE B CHAIN PRECURSOR	THERMOPHILIC BACTERIUM PS-3	50-77								
PATPD_ANASP	ATP SYNTHASE GAMMA CHAIN	ANABAENA SP	276-310								
PATPD_ECOLI	ATP SYNTHASE GAMMA CHAIN	ESCHERICHIA COLI	253-283								
PATPD_MYCGA	ATP SYNTHASE GAMMA CHAIN	MYCOPLASMA GALLISEPTICUM	28-62	92-140							
PATPD_RHORU	ATP SYNTHASE GAMMA CHAIN	RHODOSPIRILLUM RUBRUM	270-297								
PATPD_SYN1	ATP SYNTHASE GAMMA CHAIN	SYNECHOCOCCUS SP	280-307								
PATPD_SYN3	ATP SYNTHASE GAMMA CHAIN	SYNECHOCOCCUS SP	96-126	280-307							
PATPI_MYCGA	ATP SYNTHASE PROTEIN I	MYCOPLASMA GALLISEPTICUM	133-167								
PATPI_ANASP	ATP SYNTHASE B' CHAIN	ANABAENA SP	129-156								
PATPX_BACFI	ATP SYNTHASE BETA CHAIN	BACILLUS FIRMUS	162-189	356-383							
PATPX_RHORU	ATP SYNTHASE B' CHAIN	RHODOSPIRILLUM RUBRUM	40-74								
PATPX_SYN1	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	57-110	128-155							
PATPX_SYN6	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	70-100								
PATPX_SYN3	ATP SYNTHASE B' CHAIN	SYNECHOCOCCUS SP	108-135								
PATPX_BACME	ATP SYNTHASE PROTEIN I	BACILLUS MEGATERIUM	14-62								
PATP2_SYN1	ATP SYNTHASE PROTEIN I	SYNECHOCOCCUS SP	90-131								
PATPD_PSESG	ATP SYNTHASE B' CHAIN	PSEUDOMONAS SYRINGAE	184-211	233-260							
PBA71_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBA73_EUBSP	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	EUBACTERIUM SP	26-53								
PBA81_HALIM	HALORHODOPSIN	HALOBACTERIUM HALOBII	145-179								
PBA83_ECOLI	HALORHODOPSIN	HALOBACTERIUM SP	180-214								
PBA85_ECOLI	SENSOR PROTEIN BAES	ESCHERICHIA COLI	152-186								
PBA87_STRAG	IGA FC RECEPTOR PRECURSOR	STREPTOCOCCUS AGALACTIAE	92-119	138-204	267-306	343-385	487-524	562-589	1014-1041		
PBA89_VITSP	BACTERIAL HEMOGLOBIN	VITREOSCILLA SP	119-146								
PBA9C_EUBSP	BILE ACID-INDUCIBLE OPERON C PROTEIN	EUBACTERIUM SP	423-450								
PBARA_ECOLI	SENSOR PROTEIN BARA	ESCHERICHIA COLI	334-361	425-455							
PBAS5_ECOLI	SENSOR PROTEIN BAS5	ESCHERICHIA COLI	122-156								
PBAT_HALHA	PUTATIVE BACTERIO-OPSIN ACTIVATOR	HALOBACTERIUM HALOBII	408-442								
PBA3_X_ECOLI	BAX PROTEIN	ESCHERICHIA COLI	21-64								
PBCCP_ECOLI	BIOTIN CARBOXYL CARRIER PROTEIN	ESCHERICHIA COLI	6-35								
PBCGH_RHOCA	METHYLTRANSFERASE	RHODOBACTER CAPSULATUS	1000-1032								
PBCGN_RHOCA	PROTEIN CHLOROPHYLLIDE REDUCTASE 46 KD CHAIN	RHODOBACTER CAPSULATUS	249-276								
PBCN3_CLOPE	BACTERIOCLIN BCN3	CLOSTRIDIUM PERFRINGENS	72-99	585-646							
PBCPA_PROAE	BACTERIOCHLOROPHYLL A PROTEIN	PROSTHECOCHLORIS AESTUARII	63-93								
PBCSC_ACEXY	CELLULOSE SYNTHASE OPERON C PROTEIN	ACETOBACTER XYLINUM	131-158	1035-1082							
PBCSD_ACEXY	CELLULOSE SYNTHASE OPERON D PROTEIN	ACETOBACTER XYLINUM	10-37								
PBENA_AGICA	BENZOATE 1,2-DIOXYGENASE ALPHA SUBUNIT	ACINETOBACTER CALCOACETICUS	190-217								
PBETT_ECOLI	HIGH AFFINITY CHOLINE TRANSPORT PROTEIN	ESCHERICHIA COLI	243-270								
PBEXA_HAEIN	BEXA PROTEIN	HAEMOPHILUS INFLUENZAE	23-50								
PBEXC_HAEIN	BEXC PROTEIN	HAEMOPHILUS INFLUENZAE	157-184	226-253							
PBEXD_HAEIN	BEXD PROTEIN	HAEMOPHILUS INFLUENZAE	205-239								
PBFR_NITWI	BACTERIOFERRITIN	NITROBACTER WINOGRADSKYI	8-35								
PBOAQ_ECOLI	EVOLVED BETA-GALACTOSIDASE ALPHA-SUBUNIT	ESCHERICHIA COLI	955-985								
PBOAL_BACST	BETA-GALACTOSIDASE	BACILLUS STEAROTHERMOPHILUS	599-633								

PCGENE	1071784	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM	824-851								
PBGAL_CLOAB	BETA-GALACTOSIDASE	CLOSTRIDIUM ACETOBUTYLICUM	161-191								
PBGAL_CLOTU	BETA-GALACTOSIDASE	CLOSTRIDIUM THERMOSULFUROGENES	245-272								
PBGAL_KLEPN	BETA-GALACTOSIDASE	KLBSIELLA PNEUMONIAE	305-332								
PBGAL_LACDE	BETA-GALACTOSIDASE	LACTOBACILLUS DELBRUECKII	188-215								
PBGAL_STRTR	BETA-GALACTOSIDASE	STREPTOCOCCUS THERMOPHILUS	59-86	179-206							
PBGAL_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	129-156								
PBGAM_LEULA	BETA-GALACTOSIDASE SMALL SUBUNIT	LEUCONOSTOC LACTIS	106-140								
PBGAM_SULSO	BETA-GALACTOSIDASE	SULFOLOBUS SOLFATARICUS	353-380	418-445							
PBGAL_CLOTH	BETA-GALACTOSIDASE A	CLOSTRIDIUM THERMOCCELLUM	259-286	375-409	554-581	631-665					
PBGAL_CLOTH	THERMOSTABLE BETA-GLUCOSIDASE B	CLOSTRIDIUM THERMOCCELLUM	464-494	536-563							
PBGAL_ECOLI	BETA-GLUCONIDASE	ESCHERICHIA COLI	421-448								
PBGAL_AGRSP	BETA-GLUCONIDASE	AGROBACTERIUM SP	85-112	435-462	692-719	738-765					
PBGAL_BUTFI	BETA-GLUCOSIDASE A	BUTYRIVIBRIO FIBRISOLVENS	60-87								
PBINJ_STAAL	POTENTIAL DNA-INVERTASE BINJ	STAPHYLOCOCCUS AUREUS	163-190								
PBINL_STAAL	TRANSPOSON TN552 RESOLVASE	STAPHYLOCOCCUS AUREUS	163-197								
PBINR_STAAL	DNA-INVERTASE BINR	STAPHYLOCOCCUS AUREUS	33-60								
PBIOA_BACSH	AMINOTRANSFERASE	BACILLUS SPHAERICUS	145-172								
PBIOB_BACSH	BIOTIN SYNTHETASE	BACILLUS SPHAERICUS	130-157								
PBIOB_ECOLI	BIOTIN SYNTHETASE	ESCHERICHIA COLI	144-171								
PBIOB_BACSH	DETHIOBIOTIN SYNTHETASE	BACILLUS SPHAERICUS	91-118	275-305							
PBLA1_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	152-179	204-231							
PBLA1_EAEIN	BETA-LACTAMASE ROB-I PRECURSOR	HAEMOPHILUS INFLUENZAE	18-67	201-228							
PBLA2_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	18-67	201-228							
PBLA2_BACSP	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS SP	18-67								
PBLA3_BACE	BETA-LACTAMASE PRECURSOR, TYPE III	BACILLUS CEREUS	35-83	95-129							
PBLA4_PSEAE	BETA-LACTAMASE PSE-4 PRECURSOR	PSEUDOMONAS AERUGINOSA	19-50								
PBLAB_BACCE	BETA-LACTAMASE PRECURSOR, TYPE II	BACILLUS CEREUS	20-66	200-227							
PBLAB_BACFR	BETA-LACTAMASE PRECURSOR, TYPE II	BACTEROIDES FRAGILIS	22-49								
PBLAC_BACCE	BETA-LACTAMASE PRECURSOR, TYPE I	BACILLUS CEREUS	93-120	276-303							
PBLAC_BACLI	BETA-LACTAMASE PRECURSOR	BACILLUS LICHENIFORMIS	47-74	86-115							
PBLAC_PROMI	BETA-LACTAMASE PRECURSOR	PROTEUS MIRABILIS	191-221								
PBLAC_PROVU	BETA-LACTAMASE	PROTEUS VULGARIS	4-38	240-267							
PBLAC_STRAL	BETA-LACTAMASE PRECURSOR	STREPTOMYCES ALBUS G	43-70								
PBLAD_KLEPN	BETA-LACTAMASE PRECURSOR	KLBSIELLA PNEUMONIAE	121-148								
PBLAI_STAAL	PENICILLINASE REPRESSOR	STAPHYLOCOCCUS AUREUS	19-74	99-126							
PBLAO_ECOLI	BETA-LACTAMASE PRECURSOR	ESCHERICHIA COLI	118-166	235-262							
PBLAP_ECOLI	BETA-LACTAMASE PSE-2 PRECURSOR	ESCHERICHIA COLI	155-196								
PBLAR_STAAL	REGULATORY PROTEIN BLAR1	BACILLUS LICHENIFORMIS	129-156	515-552							
PBLAR_STAAL	REGULATORY PROTEIN BLAR1	STAPHYLOCOCCUS AUREUS	87-114	122-161	234-261	281-312	503-539				
PBMP_TREPA	BASIC MEMBRANE PROTEIN PRECURSOR	TREPONEMA PALLIDUM	312-346								
PBNR_BACSU	MULTIDRUG RESISTANCE PROTEIN	BACILLUS SUBTILIS	277-304								
PBNZA_PSEPU	BENZENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PBNZB_PSEPU	BENZENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PBNZD_PSEPU	P4 SUBUNIT	PSEUDOMONAS PUTIDA	179-213								
PBS2_DESAM	BP52 PROTEIN	DESULFURELLOBUS AMBIVALENS	157-237	242-290	311-355	391-435	543-573				
PBRAB_PSEAE	CARRIER PROTEIN	PSEUDOMONAS AERUGINOSA	260-287	313-340							
PBRAE_PSEAE	TRANSPORT PROTEIN BRAE	PSEUDOMONAS AERUGINOSA	254-281								
PBRAO_PSEAE	BRAO PROTEIN	PSEUDOMONAS AERUGINOSA	7-34								
PBTUB_ECOLI	VITAMIN B12 RECEPTOR PRECURSOR	ESCHERICHIA COLI	439-466								
PBTUE_ECOLI	VITAMIN B12 TRANSPORT PERIPLASMIC PROTEIN	ESCHERICHIA COLI	6-13								
PBVGA_BORPE	TRANSCRIPTION REGULATOR BVGA	BORDETTELLA PERTUSSIS	174-205								
PBVGB_BORPE	PERIPLASMIC PROTEIN BVGB PRECURSOR	BORDETTELLA PERTUSSIS	116-143								
PBVGC_BORPE	SENSOR PROTEIN BVGC	BORDETTELLA PERTUSSIS	39-66	202-229							
PBVGS_BORBR	VRULENCE BVGS PRECURSOR	BORDETTELLA BRONCHISEPTICA	113-143	341-368	501-531						
PBXA_CLOBO	BOTULINUM NEUROTOXIN TYPE A PRECURSOR	CLOSTRIDIUM BOTULINUM	313-340	686-729	733-762	815-842	851-893	968-995	1159-1207		
PBXB_CLOBO	BOTULINUM NEUROTOXIN TYPE B PRECURSOR	CLOSTRIDIUM BOTULINUM	666-693	720-762	802-832	853-890	1004-1031	1058-1089			

PCGENE	10711784	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM									
PBXCI_CLOBO	BOTULINUM NEUROTOXIN TYPE C1 PRECURSOR	CLOSTRIDIUM BOTULINUM	86-113	314-341	730-773	798-825	850-892				
PBXD_CLOBO	BOTULINUM NEUROTOXIN TYPE D PRECURSOR	CLOSTRIDIUM BOTULINUM	473-500	526-576	727-770	804-831	847-892				
PBXE_CLOBO	BOTULINUM NEUROTOXIN TYPE E PRECURSOR	CLOSTRIDIUM BOTULINUM	254-291	330-381	704-753	773-811	890-917	1060-1087			
PBXF_CLOBO	BOTULINUM NEUROTOXIN TYPE F PRECURSOR	CLOSTRIDIUM BUTYRICUM	254-291	330-381	704-753	774-808	890-917	1115-1149			
PBXF_CLOBO	BOTULINUM NEUROTOXIN TYPE F PRECURSOR	CLOSTRIDIUM BOTULINUM	669-710	735-772	892-919	1013-1040	1095-1122	1183-1210			
PC350_MICAE	CYTOTOXIN C350	MICROCYSTIS AERUGINOSA	3-30								
PCADA_BACFI	PROBABLE CADMIUM-TRANSPORTING ATPASE	BACILLUS FIRMUS	30-57	100-131	165-192	276-306	533-567				
PCADA_STAAU	PROBABLE CADMIUM-TRANSPORTING ATPASE	STAPHYLOCOCCUS AUREUS	282-309	536-570							
PCADC_ECOLI	TRANSSCRIPTIONAL ACTIVATOR CADC	ESCHERICHIA COLI	54-85	412-443							
PCAPA_TERPE	F1 CAPSULE ANCHORING PROTEIN PRECURSOR	YERSINIA PESTIS	203-240	416-457	530-557	619-646					
PCAPB_BACAN	CAPA PROTEIN	BACILLUS ANTHRACIS	108-138								
PCAPB_BACAN	CAPB PROTEIN	BACILLUS ANTHRACIS	36-70								
PCAPP_ANANI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANACYSTIS NIDULANS	248-293								
PCAPP_ANASP	PHOSPHOENOLPYRUVATE CARBOXYLASE	ANABAENA SP	98-125	157-184	687-728						
PCAPP_CORGL	PHOSPHOENOLPYRUVATE CARBOXYLASE	CORYNEBACTERIUM GLUTAMICUM	15-42								
PCAPP_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYLASE	ESCHERICHIA COLI	35-62								
PCARA_BACSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	274-319								
PCARB_ECOSU	CARBAMOYL-PHOSPHATE SYNTHASE	BACILLUS SUBTILIS	290-831								
PCARB_ECOSU	CARBAMOYL-PHOSPHATE SYNTHASE LARGE CHAI	ESCHERICHIA COLI	454-481								
PCAT2_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCAT3_STAAU	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	7-34	87-114							
PCATA_AICCA	CATECHOL 1,2-DIOXYGENASE	ACINETOBACTER CALCOACETICUS	31-65								
PCATA_BAGST	PEROXIDASE / CATALASE	BACILLUS STEAROTHERIOPHILUS	440-470								
PCATA_ECOSU	CATALASE IPI	ESCHERICHIA COLI	579-606								
PCATA_MICLU	CATALASE	MICROCOCCUS LUTEUS	433-480								
PCATA_SALTY	CATALASE IPI	SALMONELLA TYPHIMURIUM	515-542	580-607							
PCATE_ECOSU	CATALASE IPI	ESCHERICHIA COLI	175-202								
PCAT2_CAMCO	CHLORAMPHENICOL ACETYLTRANSFERASE	CAMPYLOBACTER COLI	84-111								
PCAT2_CLOBU	CHLORAMPHENICOL ACETYLTRANSFERASE	CLOSTRIDIUM BUTYRICUM	88-115								
PCAT2_ECOSU	CHLORAMPHENICOL ACETYLTRANSFERASE	ESCHERICHIA COLI	92-119								
PCAT2_PROMI	CHLORAMPHENICOL ACETYLTRANSFERASE	PROTEUS MIRABILIS	92-119								
PCAT2_STAN	CHLORAMPHENICOL ACETYLTRANSFERASE	STAPHYLOCOCCUS INTERMEDIUS	7-34	87-114							
PCAT2_STRAG	CHLORAMPHENICOL ACETYLTRANSFERASE	STREPTOCOCCUS AGALACTIAE	7-34	87-114							
PCBHE_COSBU	CBHE PROTEIN	COXIELLA BURNETII	209-236								
PCBPT_THEVU	CARBOXYPEPTIDASE T PRECURSOR	THERMOACTINOMYCES VULGARIS	48-75								
PCCA_ECOSU	TRNA NUCLEOTIDYLTRANSFERASE	ESCHERICHIA COLI	376-403								
PCOMK_SYNPI	CO2 CONC MECH PROTEIN COMK	SYNECHOCOCCUS SP	29-56								
PCOMM_SYNPI	CO2 CONC MECH PROTEIN COMM	SYNECHOCOCCUS SP	212-236	331-372	445-486						
PCDAS_THET	CYCLOMAL TODEXTRINASE	THERMOANAEROBACTER ETIHANOLICUS	305-332								
PCDGI_BACMA	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	439-466	616-643							
PCDGI_BACMA	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS MACERANS	210-231	436-466	615-642						
PCDGT_BACCI	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS CIRCULANS	217-244	442-472	594-631						
PCDGT_BACLI	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS LICHENIFORMIS	217-244	442-472	594-647						
PCDGT_BACOH	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS OHBENSIS	410-471								
PCDGT_BACSO	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	615-642						
PCDGT_BACSU	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS SP	409-471								
PCDGT_BACSU	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-462	614-641						
PCDGT_BACSP	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS SP	210-237	435-465	615-642						
PCDGT_BACSS	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS SP	217-244	442-472	594-631						
PCDGT_BACST	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	BACILLUS STEAROTHERIOPHILUS	586-646								
PCDGT_KLEPN	CYCLOMAL TODEX GLUCANOTRANS PRECURSOR	KLEBSIELLA PNEUMONIAE	212-239								
PCEA1_ECOSU	COLICIN E1 PROTEIN	ESCHERICHIA COLI	44-71	285-326							
PCEA1_SHSO	COLICIN E1* PROTEIN	SHIGELLA SONNEI	44-71	284-325	413-440						
PCEA3_ECOSU	COLICIN E3	ESCHERICHIA COLI	334-368								
PCEA3_ECOSU	COLICIN E3	ESCHERICHIA COLI	334-368								
PCEA6_ECOSU	COLICIN E6	ESCHERICHIA COLI	334-368								
PCEAB_ECOSU	COLICIN B	ESCHERICHIA COLI	283-341								

PCGENE	10717824	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM									
PCAD ECOLI	COLICIN D	ESCHERICHIA COLI	286-311								
PCAM ECOLI	COLICIN M	ESCHERICHIA COLI	178-227								
PCAN ECOLI	COLICIN N	ESCHERICHIA COLI	119-146	173-200							
PCA CTR	COLICIN A	CITROBACTER FREUNDII	228-258								
PCFD STRCL	ISOPENICILLIN N EPIMERASE	STREPTOMYCES CLAVULIGERUS	370-397								
PCIA ECOLI	COLICIN IA PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCIB ECOLI	COLICIN IB PROTEIN	ESCHERICHIA COLI	68-95	255-282	378-412	415-452					
PCIA ACXY	UTP URIDYLTRANSFERASE	ACETOBACTER XYLINUM	59-89								
PCIA ECOLI	PROTEIN CELA	ESCHERICHIA COLI	76-103								
PCFAA ECOLI	CFIAI FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	27-58								
PCFAC ECOLI	CFIAI FIMBRIAL SUBUNIT C PRECURSOR	ESCHERICHIA COLI	138-187	388-456	561-595						
PCFAD ECOLI	CFIAI FIMBRIAL SUBUNIT D	ESCHERICHIA COLI	131-160								
PCFAE ECOLI	CFIAI FIMBRIAL SUBUNIT E	ESCHERICHIA COLI	180-207	244-271							
PCH10 ACYPS	10 KD CHAPERONIN	ACRYTHOSIPHON PISUM SYMBIOTIC BACTERIU	57-95								
PCH10 BACSU	10 KD CHAPERONIN	BACILLUS SUBTILIS	66-93								
PCH10 CHLTR	10 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	64-91								
PCH10 ECOLI	10 KD CHAPERONIN	ESCHERICHIA COLI	57-84								
PCH10 HAEDU	10 KD CHAPERONIN	HAEMOPHILUS DUCREYI	68-95								
PCH10 LEGMI	10 KD CHAPERONIN	LEGIONELLA MICDADEI	57-84								
PCH10 RUCTS	10 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	65-92								
PCH10 THEP3	10 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	66-93								
PCH60 ACYPS	60 KD CHAPERONIN	ACRYTHOSIPHON PISUM SYMBIOTIC DACTERIU	341-382								
PCH60 AGRTU	60 KD CHAPERONIN	AGROBACTERIUM TUMEFACIENS	117-163	339-370	425-466						
PCH60 AMOPS	60 KD CHAPERONIN	ANOEBA PROTEUS SYMBIOTIC BACTERIUM	299-333								
PCH60 BACSU	60 KD CHAPERONIN	BACILLUS SUBTILIS	299-332	337-364							
PCH60 BORBU	60 KD CHAPERONIN	BORRELLIA BURGDORFERI	125-163	299-368							
PCH60 BRUAB	60 KD CHAPERONIN	BRUCELLA ABORTUS	117-144	339-366							
PCH60 CHLPN	60 KD CHAPERONIN	CHLAMYDIA PNEUMONIAE	4-31								
PCH60 CHLTR	60 KD CHAPERONIN	CHLAMYDIA TRACHOMATIS	4-31								
PCH60 CHRV1	60 KD CHAPERONIN	CHROMATIUM VITROSUM	300-327								
PCH60 CLOAB	60 KD CHAPERONIN	CLOSTRIDIUM ACETOBUTYLICUM	238-332	337-364	455-482						
PCH60 CLOPE	60 KD CHAPERONIN	CLOSTRIDIUM PERFRINGENS	337-368	417-444							
PCH60 COXBU	60 KD CHAPERONIN	COXIELLA BURNETII	300-327	348-382							
PCH60 HAEDU	60 KD CHAPERONIN	HAEMOPHILUS DUCREYI	339-366	417-444							
PCH60 LEGMI	60 KD CHAPERONIN	LEGIONELLA MICDADEI	299-333								
PCH60 LEOPN	60 KD CHAPERONIN	LEGIONELLA PNEUMOPHILA	298-332	452-479							
PCH60 MYCLE	60 KD CHAPERONIN	MYCOBACTERIUM LEPRAE	125-152	236-263	337-364						
PCH60 MYCTU	60 KD CHAPERONIN	MYCOBACTERIUM TUBERCULOSIS & BOVIS	125-152	237-364							
PCH60 PSEAE	60 KD CHAPERONIN	PSEUDOMONAS AERUGINOSA	339-366								
PCH60 RHILV	60 KD CHAPERONIN	RHIZOBIUM LEGUMINOSARUM	117-163	322-370	425-466						
PCH60 RUCTS	60 KD CHAPERONIN	RICKETTSIA TSUTSUGAMUSHI	103-130	291-336	360-394						
PCH60 SYN7	60 KD CHAPERONIN	SYNECHOCOCCUS SP	308-335	337-380							
PCH60 SYN73	60 KD CHAPERONIN	SYNECHOCOCCUS SP	338-365	455-489							
PCH60 THEP3	60 KD CHAPERONIN	THERMOPHILIC BACTERIUM PS-3	337-364								
PCH62 STRAL	60 KD CHAPERONIN 2	STREPTOMYCES ALBUS G	116-148	337-364							
PCB2 VIBHA	N-X-DIACETYLCHITINBIASE PRECURSOR	VIBRIO HARVEYI	21-48	772-799							
PCHEA BACSU	CHEMOTAXIS PROTEIN CHEA	BACILLUS SUBTILIS	373-400	590-617							
PCHEA ECOLI	CHEMOTAXIS PROTEIN CHEA	ESCHERICHIA COLI	256-286								
PCHEA SALTY	CHEMOTAXIS PROTEIN CHEA	SALMONELLA TYPHIMURIUM	162-197								
PCHEB BACSU	CHEMOTAXIS PROTEIN METHYLTRANSFERASE	BACILLUS SUBTILIS	124-151								
PCHEW ECOLI	PURINE-BINDING CHEMOTAXIS PROTEIN	ESCHERICHIA COLI	68-115								
PCHEW SALTY	PURINE-BINDING CHEMOTAXIS PROTEIN	SALMONELLA TYPHIMURIUM	88-115								
PCHEY ECOLI	CHEMOTAXIS PROTEIN CHEY	ESCHERICHIA COLI	22-49								
PCHEY SALTY	CHEMOTAXIS PROTEIN CHEY	SALMONELLA TYPHIMURIUM	22-49								
PCHI1 BACCI	CHITINASE A1 PRECURSOR	BACILLUS CIRCULANS	491-518	566-593							
PCIIA ALT50	CHITINASE A PRECURSOR	ALTEROMONAS SP	345-372								
PCIIA SERMA	CHITINASE A PRECURSOR	SERRA TIA MARCESCENS	346-373								

PCGENE	10717844	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	ORGANISM									
PCR70_BACT1	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	199-226	244-271	421-455						
PCR71_BACT1	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	91-133	191-218	552-615						
PCR72_BACT1	72 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	74-111	383-414							
PCR72_BACTK	70 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	91-133	191-218	552-593						
PCR77_BACT1	77 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	308-335	502-529							
PCR77_BACTI	SENSOR PROTEIN CREC	ESCHERICHIA COLI	103-130								
PCR78_BACT1	INNER MEMBRANE PROTEIN CREC	ESCHERICHIA COLI	94-121								
PCR78_BACTI	CATABOLITE GENE ACTIVATOR	ESCHERICHIA COLI & SHIGELLA FLEXNERI	26-53	127-154							
PCR79_BACT1	CATABOLITE GENE ACTIVATOR	SALMONELLA TYPHIMURIUM	26-53	127-154							
PCR79_BACTI		KLEBSIELLA AEROGES	231-258								
PCR79_BACTK	PHYTOENE DEHYDROGENASE	ERWINIA HERBICOLA	389-416								
PCR79_BACTI	PHYTOENE DEHYDROGENASE	RHODOBACTER CAPSULATUS	131-160	314-361	431-458						
PCR79_BACTK	CRYSTAL PROTEIN	RHODOBACTER CAPSULATUS	721-755	875-902							
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	710-771	865-892	1053-1080						
PCR79_BACTK	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	218-252	701-728	775-802						
PCR79_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1053-1080						
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCR79_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	710-771	865-892	1053-1080						
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779	899-926							
PCR79_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	354-384	701-728	775-802					
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892							
PCR79_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	217-251	700-727	774-801						
PCR79_BACTK	131 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	738-772	866-893	1054-1081						
PCR79_BACTI	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	737-771	865-892	1053-1080						
PCR79_BACTK	135 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	110-151	745-772	819-846						
PCR79_BACTI	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	736-770	890-917							
PCR79_BACTK	130 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	745-779								
PCR79_BACTI	133 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	608-659	662-696	892-919						
PCR79_BACTK	139 KD CRYSTAL PROTEIN	BACILLUS THURINGIENSIS	92-119	227-254	605-632	783-817	917-964				
PCR79_BACTI	CS3 PILI SYNTHESIS 63 KD PROTEIN	ESCHERICHIA COLI	42-69	226-253	290-317	344-378					
PCR79_BACTK	CS3 PILI SYNTHESIS 48 KD PROTEIN	ESCHERICHIA COLI	90-117	154-181	208-242						
PCR79_BACTI	CS3 PILI SYNTHESIS 33 KD PROTEIN	ESCHERICHIA COLI	20-47	74-108							
PCR79_BACTK	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM HALOBILIUM	256-383	584-611							
PCR79_BACTI	CELL SURFACE GLYCOPROTEIN PRECURSOR	HALOBACTERIUM VOLCANII	143-170	237-271							
PCR79_BACTK	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS FERVIDUS	59-107								
PCR79_BACTI	CELL SURFACE GLYCOPROTEIN PRECURSOR	METHANOTHERMUS SOCIABILIS	59-107								
PCR79_BACTK	CS1 FIBRILLAR SUBUNIT B PRECURSOR	ESCHERICHIA COLI	25-56								
PCR79_BACTI	COA-TRANSFERASE SUBUNIT A	CLOSTRIDIUM ACETOBUTYLICUM	118-145								
PCR79_BACTK	COA-TRANSFERASE SUBUNIT B	CLOSTRIDIUM ACETOBUTYLICUM	174-208								
PCR79_BACTI	INNER-MEMBRANE PROTEIN CTRB	NEISSERIA MENINGITIDIS	152-193								
PCR79_BACTK	CYTOTOXIN PRECURSOR	PSEUDOMONAS AERUGINOSA	78-115	124-151	160-194	217-251					
PCR79_BACTI	COLICIN V SECRETION PROTEIN CVAA	ESCHERICHIA COLI	104-138	163-219							
PCR79_BACTK	COLICIN V SECRETION PROTEIN CVAB	ESCHERICHIA COLI	151-178								
PCR79_BACTI	MIDDLE CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	197-224	411-438	1010-1044						
PCR79_BACTK	OUTER CELL WALL PROTEIN PRECURSOR	BACILLUS BREVIS	178-216	560-587	947-988						
PCR79_BACTI	ADENYLATE CYCLASE PRECURSOR	BORDETELLA PERTUSSIS	48-75	632-659	962-996						
PCR79_BACTK	ADENYLATE CYCLASE	YERSINIA INTERMEDIA	141-187	591-630							
PCR79_BACTI	CYAB PROTEIN	BORDETELLA PERTUSSIS	341-568								
PCR79_BACTK	CYAD PROTEIN	BORDETELLA PERTUSSIS	178-212								
PCR79_BACTI	CYAE PROTEIN	BORDETELLA PERTUSSIS	313-340								
PCR79_BACTK	CYTOTOXIN B	RHODOBACTER CAPSULATUS	38-65								
PCR79_BACTI	TRANSPORT PROTEIN CYDD	ESCHERICHIA COLI	3-30	382-409							
PCR79_BACTK	APOCYTOCHROME F PRECURSOR	NOSTOC SP	209-243								

PCGENE	10717824	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM									
PCYMO ACISF	CYCLOHEXANONE MONOOXYGENASE	ACINETOBACTER SP	439-473								
PCVNT SYN7	CARBONIC ANHYDRASE	SYNECHOCOCCUS SP	170-200								
PCVNX ECOLI	CYNX PROTEIN	ESCHERICHIA COLI	51-80								
PCYOB ECOLI	CYTCHROME O UBIQUINOL OXIDASE SUBUNIT I	ESCHERICHIA COLI	31-58								
PCYPH SYN7	PEPTIDYL-PROLYL CIS-TRANS ISOMERASE	SYNECHOCOCCUS SP	107-141								
PCYSA ECOLI	SULFATE PERMEASE A PROTEIN	ESCHERICHIA COLI	164-191								
PCYSB ECOLI	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	3-30								
PCYSB SALTY	CYS REGULON TRANSCRIPTIONAL ACTIVATOR	SALMONELLA TYPHIMURIUM	3-30								
PCYSE ECOLI	SERINE ACETYLTRANSFERASE	ESCHERICHIA COLI	164-191								
PCYSE SALTY	SERINE ACETYLTRANSFERASE	SALMONELLA TYPHIMURIUM	164-191								
PCYSO ECOLI	SIROHEM SYNTHASE	ESCHERICHIA COLI	405-432								
PCYSO SALTY	SIROHEM SYNTHASE	SALMONELLA TYPHIMURIUM	405-432								
PCYSN ECOLI	SULFATE ADENYLATE TRANSFERASE SUBUNIT I	ESCHERICHIA COLI	64-91								
PCYSW ECOLI	SULFATE PERMEASE W PROTEIN	ESCHERICHIA COLI	201-238								
PCYSW SYN7	SULFATE PERMEASE W PROTEIN	SYNECHOCOCCUS SP	211-238								
PCZCB ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCB	ALCALIGENES EUTROPHUS	241-268	283-320	364-391						
PCZCD ALCEU	CATION EFFLUX SYSTEM PROTEIN CZCD	ALCALIGENES EUTROPHUS	139-169								
PDACB BACSU	PENICILLIN-BINDING PROTEIN 5* PRECURSOR	BACILLUS SUBTILIS	80-107								
PDADA ECOLI	D-AMINO ACID DEHYDROGENASE	ESCHERICHIA COLI	127-134								
PDAGA ALTHA	NA(+)-LINKED D-ALANINE GLYCINE PERMEASE	ALTERNONAS HALOPLANKTIS	332-373								
PDAMX ECOLI	DAMX PROTEIN	ESCHERICHIA COLI	68-95	349-380							
PDAPA ECOLI	DEHYDRODIPICOLINATE SYNTHASE	ESCHERICHIA COLI	27-54	157-184							
PDATI BACSU	DNA-PROTEIN-CYSTEINE METHYLTRANSFERASE	BACILLUS SUBTILIS	13-47								
PDBH ECOLI	DNA-BINDING PROTEIN HU-ALPHA	ESCHERICHIA COLI	12-39								
PDBH CLOPA	DNA-BINDING PROTEIN HU	CLOSTRIDIUM PASTEURIANUM	12-53								
PDCAH ECOLI	DECARBOXYLASE PROENZYM	ESCHERICHIA COLI	146-173								
PDCAH ECOLI	DECARBOXYLASE PROENZYM	CORYNEBACTERIUM GLUTAMICUM	134-161								
PDCAH ECOLI	DIAMINOPIMELATE DECARBOXYLASE	PSEUDOMONAS AERUGINOSA	57-84								
PDCEB ECOLI	GLUTAMATE DECARBOXYLASE BETA	ESCHERICHIA COLI	4-31								
PDCHS ENTAE	HISTIDINE DECARBOXYLASE	ENTEROBACTER AEROGES	111-138								
PDCHS KLEPL	HISTIDINE DECARBOXYLASE	KLBSIELLA PLANTICOLA	111-138								
PDCHS MORMO	HISTIDINE DECARBOXYLASE	MORGANELLA MORGANII	111-138								
PDCHS MORMO	HISTIDINE DECARBOXYLASE	BACILLUS SUBTILIS	188-222								
PDCLY BACSU	DIPETIDE TRANSPORT PROTEIN DCIAD	BACILLUS SUBTILIS	305-332								
PDCLY HAFAL	LYSINE DECARBOXYLASE	HAFNIA ALVEI	305-332								
PDCAA KLEPN	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	KLBSIELLA PNEUMONIAE	261-288	342-369							
PDCAA SALTY	OXALOACETATE DECARBOXYLASE ALPHA CHAIN	SALMONELLA TYPHIMURIUM	261-288	342-369							
PDCCB SALTY	OXALOACETATE DECARBOXYLASE BETA CHAIN	SALMONELLA TYPHIMURIUM	299-326								
PDCTB RHLE	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIDUM LEGUMINOSARUM	377-411								
PDCTB RHME	TRANSPORT SENSOR PROTEIN DCTB	RHIZOBIDUM MELLLOTI	511-538								
PDEAD ECOLI	ATP-DEPENDENT RNA HELICASE DEAD	ESCHERICHIA COLI	268-295	518-545							
PDEAD KLEPN	ATP-DEPENDENT RNA HELICASE DEAD	KLBSIELLA PNEUMONIAE	267-294	519-546							
PDEDA ECOLI	DEDA PROTEIN	ESCHERICHIA COLI	106-133								
PDEGS BACSU	SENSOR PROTEIN DEGS	BACILLUS SUBTILIS	31-70	75-159	292-327						
PDEH MORSP	HALOACETATE DEHALOGENASE H-2	MORAXELLA SP	114-141								
PDEOC ECOLI	DEOXYRIBOSE-PHOSPHATE ALDOLASE	ESCHERICHIA COLI	134-161								
PDEHAL PSEOL	ALDEHYDE DEHYDROGENASE	PSEUDOMONAS OLEOVORANS	6-33								
PDHAS BACSU	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	BACILLUS SUBTILIS	150-184								
PDHAS CORGL	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	43-70	312-339							
PDHAS ECOLI	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	ESCHERICHIA COLI	229-236								
PDHAS VBCH	ASPARTATE-SEMIALDEHYDE DEHYDROGENASE	VIBRIO CHOLERAE	309-336								
PDHA BACHS	ALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	149-176								
PDHA BACST	ALANINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	94-121								
PDEH2 CLODI	NAD-SPECIFIC GLUTAMATE DEHYDROGENASE	CLOSTRIDIUM DIFFICILE	116-143								
PDEH2 PEPAS	D-SPECIFIC GLUTAMATE DEHYDROGENASE	PEPTOSTREPTOCOCCUS ASACCHAROLYTICUS	247-274	345-380							
PDEH2 SULSO	GLUTAMATE DEHYDROGENASE	SULFOLOBUS SOLFATARICUS	2-36								
PDEHA CORGL	NADP-SPECIFIC GLUTAMATE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	188-215	229-236							
PDEHA ACICA	GLUCOSE DEHYDROGENASE-A	ACINETOBACTER CALCOACETICUS	10-59	190-217							

PCGENE	1071784	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PDHGB_BACME	GLUCOSE 1-DEHYDROGENASE B	BACILLUS MEGATERIUM	27-57								
PDHQB_ECOLI	GLUCOSE DEHYDROGENASE	ESCHERICHIA COLI	436-463								
PDHK1_STRVN	KETOACYL REDUCTASE I	STREPTOMYCES VIOLACEORUBER	168-195								
PDHLE_BACST	LEUCINE DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	192-219								
PDHLO_AGR74	D,L-YSOPINE DEHYDROGENASE	AGROBACTERIUM TUMEFACIENS	317-344								
PDHMI_METEX	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM EXTORQUENS	433-187	190-224							
PDHMI_METOR	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	METHYLOBACTERIUM ORGANOPHILUM	153-187	190-224							
PDHMI_PARDE	METHANOL DEHYDROGENASE SUBUNIT 1 PREC	PARACOCCLUS DENITRIFICANS	195-222								
PDHNA_BACSP	NADH DEHYDROGENASE	BACILLUS SP	284-314								
PDHNA_ECOLI	NADH DEHYDROGENASE	ESCHERICHIA COLI	180-214								
PDHOM_BACSU	HOMOSERINE DEHYDROGENASE	BACILLUS SUBTILIS	73-107	406-433							
PDHOM_CORGL	HOMOSERINE DEHYDROGENASE	CORYNEBACTERIUM GLUTAMICUM	105-132								
PDHPH_BACSH	PHENYLALANINE DEHYDROGENASE	BACILLUS SPHAERICUS	212-239								
PDHSA_ECOLI	SUCC DEHYDROGENASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	482-512								
PDHSS_ANACY	SOLUBLE HYDROGENASE 42 KD SUBUNIT	ANABAENA CYLINDRICA	86-113	130-168							
PDHSS_SYNPI	SOLUBLE HYDROGENASE, SMALL SUBUNIT	SYNECHOCOCCLUS SP	133-160								
PDHSM_METME	TRIMETHYLAMINE DEHYDROGENASE	METHYLOTROPHUS METHYLOPHILUS	439-466								
PDHNG_ECOLI	PROBABLE ATP-DEPENDENT HELICASE DING	ESCHERICHIA COLI	584-611								
PDHVB_BACSU	DIVISION INITIATION PROTEIN	BACILLUS SUBTILIS	54-82	114-141							
PDLDI_PSEPU	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS PUTIDA	93-120								
PDLDH_AZOV1	LIPOAMIDE DEHYDROGENASE COMP (E3)	AZOTOBACTER VINELANDII	18-45	224-276							
PDLDH_BACST	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS STEAROTHERMOPHILUS	82-124								
PDLDH_BACSU	LIPOAMIDE DEHYDROGENASE COMP (E3)	BACILLUS SUBTILIS	82-109								
PDLDH_ECOLI	DIHYDROLIPOAMIDE DEHYDROGENASE	ESCHERICHIA COLI	108-135								
PDLDH_PSEFL	DIHYDROLIPOAMIDE DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	124-151	223-275							
PDMPN_PSEPU	PHENOL HYDROXYLASE P1 PROTEIN	PSEUDOMONAS PUTIDA	63-90								
PDNA1_BACSU	DNAAK PROTEIN	BACILLUS SUBTILIS	497-524	548-581							
PDNA2_BACSU	DNAAK PROTEIN	BACILLUS SUBTILIS	456-483								
PDNAA_BACSU	DNAAK PROTEIN	BACILLUS SUBTILIS	316-380								
PDNAA_BORBU	DNAAK PROTEIN	BORRELIA BURGDORFERI	182-216	248-275	341-387	436-463					
PDNAA_BUCAP	DNAAK PROTEIN	BUCHNERA APHIDICOLA	71-100	111-138	353-380						
PDNAA_ECOLI	DNAAK PROTEIN	ESCHERICHIA COLI	366-400								
PDNAA_MICLU	DNAAK PROTEIN	MICROCOCCLUS LUTEUS	385-415								
PDNAA_MYCCA	DNAAK PROTEIN	MYCOPLASMA CAPRICOLUM	8-56	75-112	274-310	330-369					
PDNAA_PROMI	DNAAK PROTEIN	PROTEUS MIRABILIS	365-399								
PDNAA_PSEPU	DNAAK PROTEIN	PSEUDOMONAS PUTIDA	398-439								
PDNAA_SFICI	DNAAK PROTEIN	SPIROPLASMA CITRI	45-72	76-110	145-180						
PDNAB_CHLTR	DNAB-LIKE PROTEIN	CHLAMYDIA TRACHOMATIS	312-353								
PDNAB_ECOLI	DNAB PROTEIN	ESCHERICHIA COLI	82-109								
PDNAB_SALTY	DNAB PROTEIN	SALMONELLA TYPHIMURIUM	82-109								
PDNAC_ECOLI	DNAC PROTEIN	ESCHERICHIA COLI	146-190								
PDNAK_BACME	DNAAK PROTEIN	BACILLUS MEGATERIUM	497-524	548-581							
PDNAK_BORBU	DNAAK PROTEIN	BORRELIA BURGDORFERI	512-594								
PDNAK_BRUOV	DNAAK PROTEIN	BRUCELLA OVIS	248-275	512-546							
PDNAK_CAUCR	DNAAK PROTEIN	CAULOBACTER CRESCENTUS	561-588								
PDNAK_CLOAB	DNAAK PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	499-526								
PDNAK_CLOPE	DNAAK PROTEIN	CLOSTRIDIUM PERFRINGENS	496-527								
PDNAK_METMA	DNAAK PROTEIN	METHANOSARCA MAZEI	523-530								
PDNAK_MYCTU	DNAAK PROTEIN	MYCOBACTERIUM TUBERCULOSIS	502-529								
PDNAK_STRCO	DNAAK PROTEIN	STREPTOMYCES COELICOLOR	45-72	533-572							
PDNIR_ECOLI	REGULATORY PROTEIN DNIR	ESCHERICHIA COLI	114-141								
PDNLI_ZYMMO	DNA LIGASE	ZYMONONAS MOBILIS	658-712								
PDNRJ_STRPE	TRANSDUCTION PROTEIN DNJR	STREPTOMYCES PEUCETIUS	24-51								
PDPOK_SULSO	PROBABLE SIGNAL RECOGNITION PARTICLE PROTE	SULFOLOBUS SOLFATARICUS	104-172								
PDPPA_BACSU	DNA POLYMERASE III, ALPHA CHAIN	BACILLUS SUBTILIS	58-85	417-444	1382-1416						
PDPPA_ECOLI	DNA POLYMERASE III, ALPHA CHAIN	ESCHERICHIA COLI	77-104								
PDPPA_SACER	DNA POLYMERASE III, ALPHA CHAIN	SACCHAROPOLYSPORA ERYTHRAEA	230-257								

PCGENE	10717844	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PDPA_SALTY	DNA POLYMERASE III, ALPHA CHAIN	SALMONELLA TYPHIMURUM	77-104								
PDPIB_BACSU	DNA POLYMERASE III, BETA CHAIN	BACILLUS SUBTILIS	212-239								
PDPIB_BORBU	DNA POLYMERASE III, BETA CHAIN	BORRELIA BURGDORFERI	266-313								
PDPIB_BUCAP	DNA POLYMERASE III, BETA CHAIN	BUCHNERA APHIDICOLA	31-62	308-359							
PDPIB_MICLU	DNA POLYMERASE III, BETA CHAIN	MICROCOCCLUS LUTEUS	191-218								
PDPIB_MYCCA	DNA POLYMERASE III, BETA CHAIN	MYCOPLASMA CAPRICOLUM	36-70								
PDPIB_PSEPU	DNA POLYMERASE III, BETA CHAIN	PSEUDOMONAS PUTIDA	30-60								
PDPIB_SPICI	DNA POLYMERASE III, BETA CHAIN	SPIROPLASMA CITRI	78-112	129-177	273-310						
PDPIB_BACSU	DNA POLYMERASE III SUBUNITS GAMMA AND TAU	BACILLUS SUBTILIS	231-272								
PDPC2_ECOLI	DNA PRIMASE TRAC-2	ESCHERICHIA COLI	691-743								
PDPC4_ECOLI	DNA PRIMASE TRAC-4	ESCHERICHIA COLI	401-448								
PDPIB_STRPN	DPND PROTEIN	STREPTOCOCCUS PNEUMONIAE	79-120								
PDPIB_BACCA	DNA POLYMERASE I	BACILLUS CALDOTTENAX	208-235								
PDPIB_STRPN	DNA POLYMERASE I	STREPTOCOCCUS PNEUMONIAE	198-225	398-425	571-598	645-672					
PDPIB_THEAQ	DNA POLYMERASE	THERMUS AQUATICUS	196-223	602-629							
PDPIB_THEEL	DNA POLYMERASE	THERMUS AQUATICUS	597-628								
PDPIB_ECOLI	DNA POLYMERASE II	ESCHERICHIA COLI	569-596								
PDPIB_PYRFU	DNA POLYMERASE	PYROCOCCLUS FURIOSUS	746-773								
PDPIB_SULSO	DNA POLYMERASE	SULFOLOBUS SOLFATARICUS	379-406	436-463	625-659	747-774					
PDPIB_THELI	DNA POLYMERASE	THERMOCOCCLUS LITORALIS	332-370	551-589	892-926	1004-1031	1153-1194				
PDPIB_LACLA	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPIB_LACLC	DIPEPTIDYL PEPTIDASE IV	LACTOCOCCUS LACTIS	716-753								
PDPIB_ECOLI	DNA PROTECTION DURING STARVATION PROTEIN	ESCHERICHIA COLI	4-45								
PDPIB_STRFQ	DEOXYRIBONUCLEASE PRECURSOR	STREPTOCOCCUS EQUIMILIS	33-60	291-318							
PDPIB_STRFE	DAUNORUBICIN RESISTANCE ATP-BINDING PROTEIN	STREPTOMYCES PEUCETUS	286-313								
PDPIB_STAAU	DIHYDROFOLATE REDUCTASE TYPE I	STAPHYLOCOCCUS AUREUS	62-89								
PEAB_ECOLI	GLUCAN ENDO-1,3-BETA-GLUCOSIDASE A1 PREC	BACILLUS CIRCULANS	134-161	305-339	424-451						
PEAB_ECOLI	ATTACHING AND EFFACING PROTEIN	ESCHERICHIA COLI	66-100	138-185	525-552	691-725	802-836	871-905			
PEAB_ECOLI	EBG OPERON REPRESSOR PROTEIN	ESCHERICHIA COLI	151-178								
PEBR_STAAU	ETHANOL BROMIDE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	68-98								
PECHH_RHOCA	ENOL-COA HYDRATASE HOMOLOG	RHODOBACTER CAPSULATUS	222-249								
PECPD_ECOLI	CHAPERONE PROTEIN ECPD PRECURSOR	ESCHERICHIA COLI	20-47								
PEDD_ZYMMO	PHOSPHOGLUCONATE DEHYDRATASE	ZYMONONAS MOBILIS	12-39	119-146							
PEDN_STAAU	EPIDERMAL CELL DIFF INH PRECURSOR	STAPHYLOCOCCUS AUREUS	427-461								
PEF2_DESMO	ELONGATION FACTOR 2	DESULFOCOCCUS MOBILIS	409-436								
PEF2_HALHA	ELONGATION FACTOR 2	HALOBACTERIUM HALOBIVM	186-213								
PEF2_METVA	ELONGATION FACTOR 2	METHANOCOCCUS VANNIELII	409-436								
PEF2_SULAC	ELONGATION FACTOR 2	SULFOLOBUS ACIDOCALDARIUS	36-63	145-180	220-247						
PEF2_THEAC	ELONGATION FACTOR 2	THERMOPLASMA ACIDOPHILUM	13-40	49-76							
PEFG_ANANI	ELONGATION FACTOR G	ANACYSTIS NIDULANS	332-359								
PEFG_ECOLI	ELONGATION FACTOR G	ESCHERICHIA COLI	234-261								
PEFG_MYCLE	ELONGATION FACTOR G	MYCOBACTERIUM LEPRAE	211-259	330-357							
PEFG_SALTY	ELONGATION FACTOR G	SALMONELLA TYPHIMURUM	214-261								
PEFG_SPLPL	ELONGATION FACTOR G	SPIRULINA PLATENSIS	334-374	481-511							
PEFG_STNY3	ELONGATION FACTOR G	SYNECHOCYSTIS SP	14-41								
PEFT1_STRRA	ELONGATION FACTOR TU1	STREPTOMYCES RAMOICISSINUS	221-258								
PEFT2_STRRA	ELONGATION FACTOR TU2	STREPTOMYCES RAMOICISSINUS	221-258								
PEFT3_STRRA	ELONGATION FACTOR TU3	STREPTOMYCES RAMOICISSINUS	228-255								
PEFTS_ECOLI	ELONGATION FACTOR EF-TS	ESCHERICHIA COLI	101-135								
PEFTS_SPICI	ELONGATION FACTOR EF-TS	SPIROPLASMA CITRI	27-54	134-161							
PEFTU_BACGR	ELONGATION FACTOR TU	BACTEROIDES FRAGILIS	18-43	229-256							
PEFTU_BACSU	ELONGATION FACTOR TU	BACILLUS SUBTILIS	11-45	230-257							
PEFTU_BURCE	ELONGATION FACTOR TU	BURKHOLDERIA CEPACIA	26-53								
PEFTU_CHLTR	ELONGATION FACTOR TU	CHLAMYDIA TRACHOMATIS	218-245								
PEFTU_DEISP	ELONGATION FACTOR TU	DEINONEMA SP	230-257								
PEFTU_FLESI	ELONGATION FACTOR TU	FLEXISTIPES SINUSARABICI	221-248								
PEFTU_HALMA	ELONGATION FACTOR TU	HALOARCTICUS MARISMORTUI	4-31								

PCGENE	10711784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILENAME	PROTEIN	ORGANISM									
PEPTU_MICLU	ELONGATION FACTOR TU	MICROCOCCUS LUTEUS	221-248								
PEPTU_MYCHO	ELONGATION FACTOR TU	MYCOPLASMA HOMINIS	222-249								
PEFTU_MYCLE	ELONGATION FACTOR TU	MYCOBACTERIUM THERMACE	220-247								
PEFTU_MYCTU	ELONGATION FACTOR TU	MYCOBACTERIUM TUBERCULOSIS	220-247								
PEFTU_SHEPU	ELONGATION FACTOR TU	SHEWANELLA PUTREFACIENS	26-51								
PEFTU_STORU	ELONGATION FACTOR TU	STREPTOCOCCUS ORALIS	232-239								
PELAS_PSEAE	PSEUDOLYSIN PRECURSOR	PSEUDOMONAS AERUGINOSA	141-168								
PELT1_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	78-105								
PELT2_ECOLI	T-LABILE ENTEROTOXIN A CHAIN PRECURSOR	ESCHERICHIA COLI	79-106								
PELT3_CLOPE	T-LABILE ENTEROTOXIN B CHAIN PRECURSOR	CLOSTRIDIUM PERFRINGENS	228-269								
PENTD_ECOLI	ENTEROBACTIN SYNTHETASE COMPONENT D	ESCHERICHIA COLI	154-188								
PENVM_SALTU	ENVY PROTEIN	SALMONELLA TYPHIMURIUM	34-61								
PEPIP_STAEP	117 KD MEMBRANE ASSOCIATED PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	51-80	125-229	290-325	387-421	857-889				
PEPIC_STAEP	EPIDERMAL BIOSYNTHESIS PROTEIN EPIC	STAPHYLOCOCCUS EPIDERMIDIS	411-447								
PEPIP_STAEP	SERINE PROTEASE EPIC PRECURSOR	STAPHYLOCOCCUS EPIDERMIDIS	7-58	297-324							
PEPIY_STAEP	HYPOTHETICAL 16.7 KD PROTEIN IN EPIC 5 REGION	STAPHYLOCOCCUS EPIDERMIDIS	70-101								
PEPIZ_STAEP	HYPOTHETICAL PROTEIN IN EPIC 5 REGION	STAPHYLOCOCCUS EPIDERMIDIS	42-100								
PERA_ECOLI	GTP-BINDING ERA PROTEIN	ESCHERICHIA COLI	18-45								
PERBS_SACER	SENSORY TRANSDUCTION PROTEIN ERYCI	SACCHAROPOLYSPORA ERYTHIRAE	209-243								
PEREA_ECOLI	ERYTHROMYCIN ESTERASE TYPE I	ESCHERICHIA COLI	37-64	143-170							
PERY1_SACER	ERYTHROMYLIDE SYNTHASE, MODULES 5 AND 6	SACCHAROPOLYSPORA ERYTHIRAE	9-36	967-994	1117-1144						
PESTA_STRSC	ESTERASE PRECURSOR	STREPTOMYCES SCABIES	128-155								
PESTE_PREFI	ARYLESTERASE	PSEUDOMONAS FLUORESCENS	162-189								
PETC1_STAAU	ENTEROTOXIN TYPE C-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	155-206							
PETC2_STAAU	ENTEROTOXIN TYPE C-2 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	155-206							
PETC3_STAAU	ENTEROTOXIN TYPE C-3 PRECURSOR	STAPHYLOCOCCUS AUREUS	76-117	155-206							
PETK4_STAAU	ENTEROTOXIN TYPE A PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	165-192							
PETXB_CLOPE	EPSILON-TOXIN, TYPE B PRECURSOR	CLOSTRIDIUM PERFRINGENS	209-236								
PETXB_STAAU	ENTEROTOXIN TYPE B PRECURSOR	STAPHYLOCOCCUS AUREUS	64-101	173-207							
PETXD_STAAU	ENTEROTOXIN TYPE D PRECURSOR	STAPHYLOCOCCUS AUREUS	153-200								
PETXE_STAAU	ENTEROTOXIN TYPE E PRECURSOR	STAPHYLOCOCCUS AUREUS	26-69	88-115							
PEUTC_SALTU	ETHANOLAMINE AMMONIA-LYASE LIGHT CHAIN	SALMONELLA TYPHIMURIUM	62-89								
PEVGA_ECOLI	PUTATIVE TRANSCRIPTION REG EVGA	ESCHERICHIA COLI	45-79	249-276	431-458	526-553	829-856				
PEVGS_ECOLI	PUTATIVE SENSOR PROTEIN EVGS	ESCHERICHIA COLI	226-253								
PEX3B_ECOLI	EXODEOXYRIBONUCLEASE V	ESCHERICHIA COLI	80-107								
PEX3B_ECOLI	BIOPOLYMER TRANSPORT EXBB PROTEIN	ESCHERICHIA COLI	180-207								
PEX3A_RHME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EX3A	RHIZOBIUM MELILOTI	218-234								
PEX3A_STRPN	EXODEOXYRIBONUCLEASE	STREPTOCOCCUS PNEUMONIAE	218-234								
PEX3F_RHME	EXOF PROTEIN	RHIZOBIUM MELILOTI	236-270	327-361							
PEX3H_RHME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EX3H	RHIZOBIUM MELILOTI	252-279								
PEX3P_RHME	SUCCINOGLYCAN BIOSYNTHESIS PROTEIN EX3P	RHIZOBIUM MELILOTI	211-242	272-299	350-391						
PFAD8_ECOLI	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	ESCHERICHIA COLI	36-63	177-204							
PFADL_ECOLI	FATTY ACID TRANSPORT PROTEIN PRECURSOR	ESCHERICHIA COLI	220-247								
PFAD8_ECOLI	OUTER MEMBRANE PROTEIN FAED PRECURSOR	ESCHERICHIA COLI	223-257	421-453	507-541						
PFAP8_ECOLI	K88 MINOR FIMBRIAL SUBUNIT PRECURSOR	ESCHERICHIA COLI	18-48								
PFAND_ECOLI	FAND PROTEIN PRECURSOR	ESCHERICHIA COLI	160-194	386-423	596-623	730-757					
PFANE_ECOLI	CHAPERONE PROTEIN FANE PRECURSOR	ESCHERICHIA COLI	22-38								
PFANG_ECOLI	FANG PROTEIN PRECURSOR	ESCHERICHIA COLI	104-131								
PFANH_ECOLI	FANH PROTEIN PRECURSOR	ESCHERICHIA COLI	83-141								
PFAP8_PSEER	FATTY OXIDATION COMPLEX ALPHA SUBUNIT	PSEUDOMONAS FRAGI	8-42	295-322							
PFDDH_WOLSU	FDHD PROTEIN	WOLINELLA SUCCINOGENES	64-98								
PTDHF_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	613-640								
PTDH_PSEER	FORMATE DEHYDROGENASE	PSEUDOMONAS SP	49-76	366-393							
PTDNG_ECOLI	FORMATE DEHYDROGENASE	ESCHERICHIA COLI	288-315	323-350	696-730						
PTCEA_ECOLI	TRANSPORT PROTEIN FECA PRECURSOR	ESCHERICHIA COLI	531-561								
PTFCC_ECOLI	TRANSPORT PROTEIN I, CYTOSOLIC	ESCHERICHIA COLI	210-237								
PFECI_ECOLI	FEIC PROTEIN	ESCHERICHIA COLI	131-158								

PCGENE	1071284	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PFEMB_STAAU	POSSIBLE PROTEIN FEMB	STAPHYLOCOCCUS AUREUS	22-36								
PFENR_SYNP2	FERRIDOXIN-NADP REDUCTASE	SYNECHOCOCCUS SP	4-31								
PFEPD_EC0LI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPC	ESCHERICHIA COLI	176-203								
PFEPD_EC0LI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPE	ESCHERICHIA COLI	182-234	281-308							
PFEPD_EC0LI	FERRIC ENTEROBACTIN TRANSPORT PROTEIN FEPP	ESCHERICHIA COLI	128-155								
PFERH_ANASP	FERRIDOXIN, HETEROCYST	ANABAENA SP	2-29								
PFERX_ANASP	FERRIDOXIN-LIKE PROTEIN IN NIF REGION	ANABAENA SP	67-94								
PFHAB_BORPE	FILAMENTOUS HEMAAGGLUTININ	BORDETTELLA PERTUSSIS	1128-1158	1359-1386	2063-2114	2841-2868	3051-3085	3167-3194			
PFHAC_BORPE	HAEMOLYSIN-LIKE PROTEIN FHAC PRECURSOR	BORDETTELLA PERTUSSIS	342-369								
PFHIA_EC0LI	FORMATE HYDROGENLYASE TRANSACTIVATOR	ESCHERICHIA COLI	36-63	350-384	401-428						
PFHUA_EC0LI	FERRIC CHROMO-IRON RECEPTOR PRECURSOR	ESCHERICHIA COLI	458-485								
PFHUB_EC0LI	PROTEIN FHUB PRECURSOR	ESCHERICHIA COLI	227-254								
PFHUE_EC0LI	OUTER-MEMBRANE RECEPTOR	ESCHERICHIA COLI	587-614								
PFIB_SPICI	FIBRIL PROTEIN	SPIROPLASMA CITRI	161-195	326-367							
PFIC_EC0LI	CELL FILAMENTATION PROTEIN FIC	ESCHERICHIA COLI	151-178								
PFIC_EC0LI	CELL FILAMENTATION PROTEIN FIC	SALMONELLA TYPHIMURIUM	151-178								
PFIMC_BORPE	OUTER MEMBRANE PROTEIN FIMC PRECURSOR	BORDETTELLA PERTUSSIS	208-235	540-567	618-645						
PFIMC_EC0LI	CHAPERONE PROTEIN FIMC PRECURSOR	ESCHERICHIA COLI	51-78	458-485	534-561	563-590					
PFIMD_EC0LI	FIMD PROTEIN PRECURSOR	ESCHERICHIA COLI	222-253								
PFIME_EC0LI	TYPE 1 FIMBRIAE REGULATORY PROTEIN FIME	ESCHERICHIA COLI	165-192								
PFIMY_SALTY	FIMBRIAE Y PROTEIN	SALMONELLA TYPHIMURIUM	49-76								
PFIMZ_EC0LI	FIMBRIAE Z PROTEIN	ESCHERICHIA COLI	42-69	162-192	196-230						
PFIMZ_SALTY	FIMBRIAE Z PROTEIN	SALMONELLA TYPHIMURIUM	175-209								
PFINQ_EC0LI	FINQ PROTEIN	ESCHERICHIA COLI	145-172								
PFIRA_RICRI	FIRA PROTEIN	RICKETTSIA RICKETTSII	162-189								
PFIXC_AZOCA	FIXC PROTEIN	AZORHIZOBIVUM CAULINODANS	179-156								
PFIXL_AZOCA	SENSOR PROTEIN FIXL	AZORHIZOBIVUM CAULINODANS	247-274								
PFIXL_BRAJA	SENSOR PROTEIN FIXL	BRADYRIZOBIVUM JAPONICUM	27-54	253-280							
PFLA1_BORBU	FLAGELLAR FILAMENT 41 KD CORE PROTEIN	BORRELIA BURGDORFERI	8-35	271-298							
PFLA1_HALHA	FLAGELLIN A1 PRECURSOR	HALOBACTERIUM HALOBIVUM	63-92	157-184							
PFLA1_METVO	FLAGELLIN B1 PRECURSOR	METHANOCOCCUS VOLTAE	28-73	133-160							
PFLA2_METVO	FLAGELLIN B2 PRECURSOR	METHANOCOCCUS VOLTAE	28-66								
PFLA3_HALHA	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	35-76								
PFLA3_METVO	FLAGELLIN B3 PRECURSOR	METHANOCOCCUS VOLTAE	36-63								
PFLA4_HALHA	FLAGELLIN B4 PRECURSOR	HALOBACTERIUM HALOBIVUM	36-90	157-184							
PFLA5_HALHA	FLAGELLIN B5 PRECURSOR	HALOBACTERIUM HALOBIVUM	36-63	154-181							
PFLA6_BACSU	FLAA LOCUS 22.9 KD PROTEIN	BACILLUS SUBTILIS	73-149	155-186							
PFLAA_CAMCO	FLAGELLIN A	CAMPYLOBACTER COLI	15-42	144-191	497-535						
PFLAA_METVO	FLAGELLIN A PRECURSOR	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538						
PFLAA_CAMJE	FLAGELLIN A	METHANOCOCCUS VOLTAE	28-62								
PFLAA_PSEAE	FLAGELLIN	PSEUDOMONAS AERUGINOSA	3-41	51-88	97-124						
PFLAA_RHME	FLAGELLIN	RHIZOBIVUM MELILOTI	181-219	228-265	360-391						
PFLAA_SPIAU	FLAGELLAR FILAMENT PROTEIN PRECURSOR	SPIROCHAETA AURANTIA	162-189								
PFLAA_TREHY	FLAGELLAR FILAMENT PROTEIN PRECURSOR	TREPONEMA HYDYSINTERIAE	55-89	219-285							
PFLAA_TREPA	FLAGELLAR FILAMENT OUTER LAYER PROTEIN	TREPONEMA PALLIDUM	243-270								
PFLAB_CAMCO	FLAGELLIN B	CAMPYLOBACTER COLI	144-191	497-535							
PFLAB_CAMJE	FLAGELLIN B	CAMPYLOBACTER JEJUNI	220-266	310-337	500-538						
PFLAB_RHME	FLAGELLIN	RHIZOBIVUM MELILOTI	86-113	177-219	228-255	360-391					
PFLAV_GLOMP	FLAVODOXIN	CLOSTRIDIUM NP	18-52								
PFLAV_CAUCR	REGULATORY PROTEIN FLAV	CAULOBACTER CRESCENTUS	291-318	551-578							
PFLA_BACSU	FLAGELLIN	BACILLUS SUBTILIS	102-129	228-255							
PFLGO_BACSU	FLAGELLAR BASAL-BODY ROD PROTEIN FLGG	BACILLUS SUBTILIS	62-89								
PFLGK_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 1	SALMONELLA TYPHIMURIUM	12-50	331-360	456-540						
PFLGL_EC0LI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	ESCHERICHIA COLI	61-105	229-266							
PFLGL_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 3	SALMONELLA TYPHIMURIUM	61-105	229-266							
PFLHD_EC0LI	FLAGELLAR TRANSCRIPTIONAL ACTIVATOR FLHD	ESCHERICHIA COLI	6-33								
PFLIA_PSEAE	FLAGELLAR OPERON RNA POL SIGMA FACTOR	PSEUDOMONAS AERUGINOSA	198-232								

PCGENE	1071784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM									
PELIC_ECOLI	FLAGELLIN	ESCHERICHIA COLI	3-41	186-213	295-329	431-466					
PELIC_SALCH	FLAGELLIN	SALMONELLA CHOLERAE-SUIS	5-41	54-125	136-198						
PELIC_SALMU	FLAGELLIN	SALMONELLA MUECHEN	5-41	54-88	136-177	232-259	272-299	376-403			
PELIC_SALPA	FLAGELLIN	SALMONELLA PARATYPH-A	5-41	54-125	136-184						
PELIC_SALRU	FLAGELLIN	SALMONELLA RUBISLAW	5-41	54-125	136-196						
PELIC_SALTY	FLAGELLIN	SALMONELLA TYPHIMURIUM	5-41	54-125	136-200						
PELIC_SERMA	FLAGELLIN	SERRATIA MARCESCENS	15-42	55-89	103-130	137-164	275-321				
PELIC_ECOLI	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	ESCHERICHIA COLI	32-66	106-133	160-187	216-298	386-445				
PELIC_SALTY	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	SALMONELLA TYPHIMURIUM	32-66	106-133	255-299	407-438					
PELIC_BACSU	FLAG HOOK-BASAL BODY PROTEIN FLIE	BACILLUS SUBTILIS	8-35								
PELIC_BACSU	FLAG HOOK-BASAL BODY PROTEIN	BACILLUS SUBTILIS	327-361	391-418							
PELIC_CAUCR	FLAGELLAR M-RING PROTEIN	CAULOBACTER CRESCENTUS	24-51	297-324	361-388						
PELIC_SALTY	FLAGELLAR M-RING PROTEIN	SALMONELLA TYPHIMURIUM	484-529								
PELIC_BACSU	FLAGELLAR SWITCH PROTEIN FLIG	BACILLUS SUBTILIS	35-62								
PELIC_ECOLI	FLAGELLAR SWITCH PROTEIN FLIG	ESCHERICHIA COLI	44-71								
PELIC_BACSU	PROBABLE FLIIH PROTEIN	BACILLUS SUBTILIS	19-46	105-132							
PELIC_SALTY	FLAGELLAR FLII PROTEIN	BACILLUS SUBTILIS	7-37								
PELIC_BACSU	FLAGELLAR FLII PROTEIN	SALMONELLA TYPHIMURIUM	75-118								
PELIC_SALTY	PROBABLE FLIK PROTEIN	BACILLUS SUBTILIS	77-104	117-144							
PELIC_BACSU	FLII PROTEIN	BACILLUS SUBTILIS	30-71	78-105	109-136						
PELIC_ECOLI	FLII PROTEIN	ESCHERICHIA COLI	105-132								
PELIC_SALTY	FLII PROTEIN	SALMONELLA TYPHIMURIUM	103-133								
PELIC_BACSU	FLIM PROTEIN	BACILLUS SUBTILIS	148-175								
PELIC_ECOLI	FLIM PROTEIN	ESCHERICHIA COLI	251-278								
PELIC_CAUCR	FLAGELLAR MOTOR SWITCH PROTEIN	CAULOBACTER CRESCENTUS	56-83								
PELIC_ECOLI	FLAGELLAR PROTEIN FLIT	ESCHERICHIA COLI	59-86								
PELIC_SALTY	FLAGELLAR PROTEIN FLIT	SALMONELLA TYPHIMURIUM	9-46	67-106							
PELIC_BACSU	PROBABLE FLIK PROTEIN	BACILLUS SUBTILIS	30-67	80-114							
PELIC_ECOLI	TYPE-1 FIMBRIAL PROTEIN, A CHAIN PRECURSOR	PSEUDOMONAS AERUGINOSA	5-32								
PELIC_ECOLI	TYPE-1 FIMBRIAL PROTEIN, C CHAIN PRECURSOR	ESCHERICHIA COLI	11-38								
PELIC_ECOLI	FIMBRIAL SUBUNIT TYPE 1 PRECURSOR	ACTINOMYCES VISCOUS	248-282	352-379	417-444						
PELIC_ECOLI	FIMBRIAL PROTEIN 987P PRECURSOR	ESCHERICHIA COLI	114-141								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-134								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	110-137								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	123-150								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	107-141								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	95-122								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	111-145								
PELIC_BACNO	FIMBRIAL PROTEIN PRECURSOR	BACTEROIDES NODOSUS	96-123								
PELIC_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PELIC_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	355-382							
PELIC_BACNO	POSSIBLE FIMBRIAL ASSEMBLY PROTEIN FIMD	BACTEROIDES NODOSUS	106-144	355-382							
PELIC_ECOLI	F17 FIMBRIAL PROTEIN PRECURSOR	ESCHERICHIA COLI	97-124								
PELIC_NEIME	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA MENINGITIDIS	70-97								
PELIC_NEIGO	FIMBRIAL PROTEIN PRECURSOR	NEISSERIA GONORRHOEAE	66-97								
PELIC_MORNO	FIMBRIAL PROTEIN PRECURSOR	MORAXELLA NONLIQUEFACIENS	108-146								
PELIC_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	30-67	80-114							
PELIC_PSEAE	FIMBRIAL PROTEIN PRECURSOR	PSEUDOMONAS AERUGINOSA	70-97								
PELIC_ECOLI	CS1 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	60-87	112-139							
PELIC_ECOLI	CS3 FIMBRIAL SUBUNIT A PRECURSOR	ESCHERICHIA COLI	49-98								
PELIC_HAEIN	MAJOR FIMBRIAL SUBUNIT PRECURSOR	HAEMOPHILUS INFLUENZAE	102-129								
PELIC_STAAU	FIBRONECTIN-BINDING PROTEIN PRECURSOR	STAPHYLOCOCCUS AUREUS	41-83	188-215	311-365	431-458	517-555	652-686	722-756		
PELIC_ECOLI	FOLYLPOLYGLUTAMATE SYNTHASE	ESCHERICHIA COLI	125-159								
PELIC_LACCA	FOLYLPOLYGLUTAMATE SYNTHASE	LACTOBACILLUS CASEI	129-156								
PELIC_BACFI	FORMAMIDOPYRIMIDINE-DNA GLYCOSYLASE	BACILLUS FIRMS	153-180								

PGCENE	107x175x4	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM									
PFDA_ECOLI	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	ESCHERICHIA COLI	395-422								
PFDA_WOLSI	FUMARATE REDUCTASE FLAVOPROTEIN SUBUNIT	WOLINELLA SUCCINIGENES	8-35	487-514							
PFZE_MYXXA	GLIDING MOTILITY REGULATORY PROTEIN	MYXOCOCCUS XANTHUS	15-42	478-505							
PFTS_CLOTH	FORMATE-TETRAHYDROFOLATE LIGASE	CLOSTRIDIUM THERMOACETUM	163-190								
PFTS_MEITH	FORMYLTRANSFERASE	METHANOBACTERIUM THERMOAUTOTROPHICUM	9-43								
PFTSA_BACSU	CELL DIVISION PROTEIN FTSA	BACILLUS SUBTILIS	76-110								
PFTSA_ECOLI	CELL DIVISION PROTEIN FTSA	ESCHERICHIA COLI	301-338	375-418							
PFTSL_ECOLI	CELL DIVISION PROTEIN FTSI	ESCHERICHIA COLI	4-31								
PFTSL_ECOLI	CELL DIVISION PROTEIN FTSI	ESCHERICHIA COLI	63-90								
PFTSN_ECOLI	CELL DIVISION PROTEIN FTSN	ESCHERICHIA COLI	151-188								
PFTSX_ECOLI	CELL DIVISION PROTEIN FTSX	ESCHERICHIA COLI	278-305								
PFTSY_ECOLI	CELL DIVISION PROTEIN FTSY	ESCHERICHIA COLI	230-260								
PFUCR_ECOLI	L-FUCULOSE OPERON ACTIVATOR	ESCHERICHIA COLI	7-45								
PFUMA_BACST	FUMARATE HYDRATASE CLASS I, AEROBIC	BACILLUS STEAROTHERMOPHILUS	290-317								
PFUMH_BACSU	FUMARATE HYDRATASE	BACILLUS SUBTILIS	414-445								
PFUR_YERPE	FERRIC UPTAKE REGULATION PROTEIN	YERSINIA PESTIS	99-130								
PGPI_ECOLI	GLYC 1-PHOS DEHYDROGENASE A	ESCHERICHIA COLI	302-329								
PGP2_ANAVA	GLYC 1-PHOS DEHYDROGENASE 2	ANABAENA VARIABILIS	87-114								
PGP2_ANAVA	GLYC 1-PHOS DEHYDROGENASE 3	ANABAENA VARIABILIS	162-189								
PGP2_ECOLI	GLYC 1-PHOS DEHYDROGENASE C	ESCHERICHIA COLI	236-324								
PGP3_BACME	GLYC 1-PHOS DEHYDROGENASE	BACILLUS MEGATERIUM	49-76	237-271							
PGP3_BACSU	GLYC 1-PHOS DEHYDROGENASE	BACILLUS SUBTILIS	49-76								
PGP3_PYRWO	GLYC 1-PHOS DEHYDROGENASE	PYROCOCUS WOESLEI	259-286								
PGP3_THEMA	GLYC 1-PHOS DEHYDROGENASE	THERMOTOGA MARITIMA	290-328								
PGPB_BACST	GLUCOSE-6-PHOSPHATE ISOMERASE B	BACILLUS STEAROTHERMOPHILUS	103-143	241-268							
PGPD_ECOLI	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ESCHERICHIA COLI	301-328								
PGPD_ZYMAO	GLUCOSE-6-PHOSPHATE 1-DEHYDROGENASE	ZYMONOMAS MOBILIS	165-192								
PGACA_PSEFL	CYANIDE CONTROL PROTEIN	PSEUDOMONAS FLUORESCENS	178-205								
PGAL1_SALTU	GALACTOKINASE	SALMONELLA TYPHIMURIUM	86-113								
PGAL7_HAEIN	GAL-1-PHOS URIDYL YLTRANSFERASE	HABMOPHILUS INFLUENZAE	124-158	239-269							
PGAL7_LACHE	GAL-1-PHOS URIDYL YLTRANSFERASE	LACTOBACILLUS HELVETICUS	304-338								
PGALF_SALTU	GALACTOSE OPERON REPRESSOR	SALMONELLA TYPHIMURIUM	53-91								
PGALR_HAEIN	GALACTOSE OPERON REPRESSOR	HABMOPHILUS INFLUENZAE	182-209								
PGAL_PSEFL	DE D-GALACTOSE 1-DEHYDROGENASE	PSEUDOMONAS FLUORESCENS	251-278								
PGCH2_ECOLI	GTP CYCLOHYDROLASE II	ESCHERICHIA COLI	78-105								
PGCH2_PHOLE	GTP CYCLOHYDROLASE II	PHOTOBACTERIUM LEIOGNATHI	197-227	246-273							
PGCSH_ECOLI	GLYCINE CLEAVAGE SYSTEM H PROTEIN	ESCHERICHIA COLI	10-37								
PGCSP_ECOLI	GLYCINE DEHYDROGENASE	ESCHERICHIA COLI	216-246								
PGCVA_ECOLI	GLYCINE CLEAVAGE SYSTEM TRANSACTIVATOR	ESCHERICHIA COLI	60-94								
PGENK_ECOLI	PROTEIN K	ESCHERICHIA COLI	24-51								
PGER1_BACSU	SPORE GERMINATION PROTEIN I	BACILLUS SUBTILIS	49-83	182-216	350-384						
PGERJ_BACSU	SPORE GERMINATION PROTEIN III PRECURSOR	BACILLUS SUBTILIS	293-323								
PGERE_BACSU	GERMINATION PROTEIN GERE	BACILLUS SUBTILIS	13-40								
PGG12_STAHA	ANTIBACTERIAL PROTEIN 2	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGG13_STAHA	ANTIBACTERIAL PROTEIN 3	STAPHYLOCOCCUS HAEMOLYTICUS	6-33								
PGIDA_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN A	BACILLUS SUBTILIS	396-423								
PGIDA_ECOLI	GLUCOSE INHIBITED DIVISION PROTEIN A	ESCHERICHIA COLI	533-568								
PGIDA_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN A	PSEUDOMONAS PUTIDA	539-566								
PGIDB_BACSU	GLUCOSE INHIBITED DIVISION PROTEIN B	BACILLUS SUBTILIS	34-61								
PGIDB_PSEPU	GLUCOSE INHIBITED DIVISION PROTEIN B	PSEUDOMONAS PUTIDA	25-52								
PGICP_SYNT3	GLUCOSE TRANSPORT PROTEIN	SYNECHOCYSTIS SP	288-322								
PGIDA_BACST	GLYCEROL DEHYDROGENASE	BACILLUS STEAROTHERMOPHILUS	20-79								
PLGA_ECOLI	GLYCEROL SYNTHASE	ESCHERICHIA COLI	256-283								
PLGCC_ECOLI	GLUCOSE-1-PHOSPHATE ADENYL YLTRANSFERASE	ESCHERICHIA COLI	114-141								
PLGCC_SALTU	GLUCOSE-1-PHOSPHATE ADENYL YLTRANSFERASE	SALMONELLA TYPHIMURIUM	114-141								
PLGMS_ECOLI	GLUC-6-FRUC-6-PHOSAMINOTRANSFERASE	ESCHERICHIA COLI	209-243								
PLGNI_MEITL	GLNB-LIKE PROTEIN I	METHANOCOCCUS THERMOLITHOTROPHICUS	58-85								

PCGENE	10717184	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PGSPX_XANCP	PROTEIN F	XANTHOMONAS CAMPESTRIS	210-257								
PGSPH_PSEAE	PROTEIN H PRECURSOR	PSEUDOMONAS AERUGINOSA	18-59								
PGSPI_AERHY	PROTEIN I PRECURSOR	AEROMONAS HYDROPHILA	27-61								
PGSPI_ERWCA	PROTEIN I PRECURSOR	ERWINIA CAROTOVORA	35-62								
PGSPJ_KLEPN	PROTEIN I PRECURSOR	KLEBSIELLA PNEUMONIAE	140-167								
PGSPK_ERWCA	PROTEIN K	ERWINIA CAROTOVORA	28-55								
PGSPK_ERWCH	PROTEIN K	ERWINIA CHRYSANTHEMI	28-55								
PGSPK_KLEPN	PROTEIN K	KLEBSIELLA PNEUMONIAE	72-99								
PGSPK_PSEAE	PROTEIN K	PSEUDOMONAS AERUGINOSA	262-289								
PGSPL_ERWCH	PROTEIN L	ERWINIA CHRYSANTHEMI	7-42	248-286	311-358						
PGSPL_XANCP	PROTEIN L	XANTHOMONAS CAMPESTRIS	39-73	297-324							
PGSPM_ERWCA	PROTEIN M	ERWINIA CAROTOVORA	108-145								
PGSOD_ERWCH	PROTEIN D PRECURSOR	ERWINIA CHRYSANTHEMI	259-302	448-475	546-573	657-684					
PGTFL_STRDO	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS DOWNEI	42-69	177-204	212-239	464-491	1382-1416	1495-1529			
PGTFL_STRDO	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS DOWNEI	171-198	206-233	458-485	1382-1412	1407-1524				
PGTFA_STRMU	GLUCOSYLTRANSFERASE-S	STREPTOCOCCUS MUTANS	297-350								
PGTFC_STRMU	GLUCOSYLTRANSFERASE-I PRECURSOR	STREPTOCOCCUS MUTANS	42-93	110-137	161-188	199-246	313-347	592-627			
PGTFC_STRMU	GLUCOSYLTRANSFERASE-SI PRECURSOR	STREPTOCOCCUS MUTANS	4-40	110-138	235-262	330-361	614-653				
PGTFS_STRDO	GLUCOSYLTRANSFERASE-S PRECURSOR	STREPTOCOCCUS DOWNEI	275-316	436-463	1281-1315						
PGTMR_METTF	POSSIBLE G-T MISMATCHES REPAIR ENZYME	METHANOBACTERIUM THERMOFORMICUM	80-107	148-175							
PGUAA_BACSU	GMP SYNTHASE	BACILLUS SUBTILIS	314-348	399-436	478-503						
PGUAA_ECOLI	GMP SYNTHASE	ESCHERICHIA COLI	105-132								
PGUB_BACCI	BETA-GLUCANASE PRECURSOR	BACILLUS CIRCULANS	164-191								
PGUB_BAGLI	BETA-GLUCANASE PRECURSOR	BACILLUS LICHENIFORMIS	132-166								
PGUB_BAGMA	BETA-GLUCANASE PRECURSOR	BACILLUS MACERANS	126-160								
PGUNI_BACS4	ENDOGLUCANASE A	BACILLUS SP	18-49								
PGUNI_BACS4	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304	376-403							
PGUNI_BUTEI	ENDOGLUCANASE I	BUTYRIVIBRIO FIBROSOLVENS	154-181	452-495							
PGUNZ_THEFU	ENDOGLUCANASE E-2 PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUNZ_THEFU	ENDOGLUCANASE E-2 PRECURSOR	THERMONOSPORA FUSCA	201-228								
PGUNZ_BACS4	ENDOGLUCANASE C PRECURSOR	BACILLUS SP	110-137	348-378	538-565						
PGUNZ_BACS4	ENDOGLUCANASE PRECURSOR	BACILLUS SUBTILIS	270-304								
PGUNZ_FIBSU	ENDOGLUCANASE J PRECURSOR	FIBROBACTER SUCCINOGENES	542-586								
PGUNA_THEFU	ENDOGLUCANASE E-4 PRECURSOR	THERMONOSPORA FUSCA	308-342								
PGUNA_THEFU	ENDOGLUCANASE E-3 PRECURSOR	THERMONOSPORA FUSCA	44-71								
PGUNA_BAGLA	ENDOGLUCANASE A PRECURSOR	BACILLUS LAUTUS	410-437	454-481							
PGUNA_CLOTM	ENDOGLUCANASE A PRECURSOR	CLOSTRIDIUM THERMOCELLUM	354-384								
PGUNA_PSEFL	ENDOGLUCANASE A PRECURSOR	PSEUDOMONAS FLUORESCENS	762-789								
PGUNA_RUMAL	ENDOGLUCANASE A	RUMINOCOCCUS ALBUS	294-321								
PGUNA_RUMFL	CELLODEXTRINASE A	RUMINOCOCCUS FLAVIFACIENS	276-303								
PGUNB_BAGLA	ENDOGLUCANASE B PRECURSOR	BACILLUS LAUTUS	375-450								
PGUNB_CALSA	ENDOGLUCANASE B	CALDOCELLUM SACCHAROLYTICUM	151-182	444-478							
PGUNB_CELFI	ENDOGLUCANASE B PRECURSOR	CELLULOMONAS FIMI	266-293								
PGUNB_CLOCL	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM CELLULOYORANS	144-171	266-300							
PGUNB_CLOTM	ENDOGLUCANASE B PRECURSOR	CLOSTRIDIUM THERMOCELLUM	514-541								
PGUNC_CELFI	ENDOGLUCANASE C PRECURSOR	CELLULOMONAS FIMI	881-908								
PGUNC_PSEFL	ENDOGLUCANASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	52-82								
PGUND_CLOCE	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOYLYTICUM	382-453								
PGUND_CLOCE	ENDOGLUCANASE D PRECURSOR	CLOSTRIDIUM CELLULOYLYTICUM	145-172	271-298							
PGUNE_CLOTM	ENDOGLUCANASE E PRECURSOR	CLOSTRIDIUM THERMOCELLUM	158-185	207-234	284-311						
PGUNH_CLOTM	ENDOGLUCANASE H PRECURSOR	CLOSTRIDIUM THERMOCELLUM	46-73	423-452							
PGUNH_ERWCA	ENDOGLUCANASE PRECURSOR	ERWINIA CAROTOVORA	20-47	115-149							
PGUNX_CLOTM	PUTATIVE ENDOGLUCANASE X	CLOSTRIDIUM THERMOCELLUM	105-139								
PGUNZ_CLOS	ENDOGLUCANASE Z PRECURSOR	CLOSTRIDIUM STERCORARIUM	296-326	522-549							
PGUN_BACS1	ENDOGLUCANASE PRECURSOR	BACILLUS SP	198-225								
PGUN_BACS1	ENDOGLUCANASE PRECURSOR	BACILLUS SP	321-348								
PGUN_BACS6	ENDOGLUCANASE PRECURSOR	BACILLUS SP	198-229	501-528	623-664						

PCGENE	10711784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM									
PGUTD_ECOLI	SORBITOL-4-PHOSPHATE 2-DEHYDROGENASE	ESCHERICHIA COLI	138-163								
POVPI_HALHA	GAS VESICLE PROTEIN, PLASMID	HALOBACTERIUM HALOBIIUM	36-63								
POVPI_HALHA	GAS VESICLE PROTEIN, CHROMOSOMAL	HALOBACTERIUM HALOBIIUM	36-63								
POVPA_APHFL	GAS VESICLE PROTEIN	APHANIZOMENON FLOS-AQUAE	4-31	39-66							
POVPA_FREDI	GAS VESICLE PROTEIN	FREMYELLA DIPLOPHON	4-31	39-66							
POVPA_HALME	GAS VESICLE PROTEIN	HALOBACTERIUM MEDITERRANEI	37-64								
POVPA_MICBC	GAS VESICLE PROTEIN	MICROCYSTIS SP.	39-66								
POVPA_PSEAN	GAS VESICLE PROTEIN C	PSEUDONANABAENA SP.	4-31	39-66							
POVPC_APHFL	GAS VESICLE PROTEIN C	APHANIZOMENON FLOS-AQUAE	8-49								
POVPC_HALHA	GAS VESICLE PROTEIN C	HALOBACTERIUM HALOBIIUM	150-249								
POVPC_HALME	GAS VESICLE PROTEIN C	HALOBACTERIUM MEDITERRANEI	139-169								
POVPD_HALHA	GVPD PROTEIN, PLASMID	HALOBACTERIUM HALOBIIUM	110-147								
POVPD_HALME	GVPD PROTEIN	HALOBACTERIUM MEDITERRANEI	110-147								
POVPE_HALHA	GVPF PROTEIN, PLASMID	HALOBACTERIUM HALOBIIUM	13-47	135-169							
POVPE_HALME	GVPF PROTEIN	HALOBACTERIUM MEDITERRANEI	13-47								
POVPE_HALSA	GVPF PROTEIN	HALOBACTERIUM SALINARIUM	8-49								
POVPG_HALHA	GVPG PROTEIN, PLASMID	HALOBACTERIUM HALOBIIUM	38-65								
POVPG_HALME	GVPG PROTEIN	HALOBACTERIUM MEDITERRANEI	38-72								
POVPH_HALHA	GVPH PROTEIN	HALOBACTERIUM HALOBIIUM	10-40								
POVPI_HALME	GVPI PROTEIN	HALOBACTERIUM MEDITERRANEI	5-32								
POVPK_HALHA	GVPK PROTEIN	HALOBACTERIUM HALOBIIUM	45-76								
POVPK_HALME	GVPK PROTEIN	HALOBACTERIUM MEDITERRANEI	12-39	41-74							
POVPL_HALSA	GVPL PROTEIN	HALOBACTERIUM SALINARIUM	11-38	50-77							
POVPL_HALME	GVPL PROTEIN	HALOBACTERIUM MEDITERRANEI	44-78								
POVPI_HALHA	GVPI PROTEIN	HALOBACTERIUM HALOBIIUM	113-140								
POVPI_HALME	GVPI PROTEIN	HALOBACTERIUM MEDITERRANEI	15-56								
POVPO_HALME	GVPO PROTEIN	HALOBACTERIUM MEDITERRANEI	69-96	103-132							
POVRA_BACSU	DNA GYRASE SUBUNIT A	BACILLUS SUBTILIS	380-407	429-499							
POVRA_CAMIE	DNA GYRASE SUBUNIT A	CAMPYLOBACTER JEJUNI	267-310	381-408	452-479	665-695					
POVRA_ECOLI	DNA GYRASE SUBUNIT A	ESCHERICHIA COLI	266-291	449-497							
POVRA_KLEPN	DNA GYRASE SUBUNIT A	KLEBSIELLA PNEUMONIAE	266-291	448-496	518-545						
POVRA_MYCPN	DNA GYRASE SUBUNIT A	MYCOPLASMA PNEUMONIAE	4-31								
POVRA_STAAU	DNA GYRASE SUBUNIT A	STAPHYLOCOCCUS AUREUS	129-156	146-173	430-479	647-674	812-839				
POVRA_BACSU	DNA GYRASE SUBUNIT B	BACILLUS SUBTILIS	198-239								
POVRA_BORBU	DNA GYRASE SUBUNIT B	BORRELIA BURGDORFERI	154-181								
POVRA_ECOLI	DNA GYRASE SUBUNIT B	ESCHERICHIA COLI	616-643								
POVRA_HALSQ	DNA GYRASE SUBUNIT B	HALOFERAX SP.	230-257								
POVRA_MYCPN	DNA GYRASE SUBUNIT B	MYCOPLASMA PNEUMONIAE	249-283								
POVRA_NEIGO	DNA GYRASE SUBUNIT B	NEISSERIA GONORRHOEA	524-558	618-645							
POVRA_PSEPU	DNA GYRASE SUBUNIT B	PSEUDOMONAS PUTIDA	122-149	684-711							
POVRA_SPICI	DNA GYRASE SUBUNIT B	SPIROPLASMA CITRI	40-74	189-238	283-310	341-368	540-579				
POVRA_STAAU	DNA GYRASE SUBUNIT B	STAPHYLOCOCCUS AUREUS	252-279	291-318							
PHDHA_ECOLI	7-ALPHA-HYDROXYSTEROID DEHYDROGENASE	ESCHERICHIA COLI	71-98								
PHELD_ECOLI	HELICASE IV	ESCHERICHIA COLI	100-134								
PHEL_HAEIN	LIPOPROTEIN E PRECURSOR	HAEMOPHILUS INFLUENZAE	58-85	529-556							
PHEMI_CHLVI	GLUTAMYL-TRNA REDUCTASE	CHLOROBIDIUM VIBRIOFORMES	232-259								
PHEMI_ECOLI	GLUTAMYL-TRNA REDUCTASE	ESCHERICHIA COLI	289-316								
PHEMI_RHOSH	5-AMINOLEVULINIC ACID SYNTHASE	RHODOBACTER SPHAEROIDES	73-100								
PHEMI_SALTY	GLUTAMYL-TRNA REDUCTASE (SALMONELLA TYPHIMURUM	289-316	344-371							
PHEMI_SYNY3	GLUTAMYL-TRNA REDUCTASE	SYNECHOCYSTIS SP.	163-190	350-377							
PHIEM2_METSC	DELTA-AMINOLEVULINIC ACID DEHYDRATASE	METHANOTHERMUS SOCIABILIS	131-158								
PHIEM4_BACSU	PUTATIVE UROPORPHYRINOGEN-III SYNTHASE	BACILLUS SUBTILIS	10-37								
PHIEM4_ECOLI	UROPORPHYRINOGEN-III SYNTHASE	ESCHERICHIA COLI	211-238								
PHIEM4_ECOLI	HEMAM PROTEIN	ESCHERICHIA COLI	147-174								
PHIEM4_YEREN	HEMAM RECEPTOR PRECURSOR	YERSINIA ENTEROCOLITICA	234-261								
PHIEM4_ECOLI	PUTATIVE METHYLTRANSFERASE	ESCHERICHIA COLI	69-138	185-219							
PHIEM4_BACSU	HEMTY PROTEIN	BACILLUS SUBTILIS	217-262								

PCGENE	1071178.4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PHENZ_BACSU	FERROCHELATASE	BACILLUS SUBTILIS	199-226								
PHETA_ANASP	HETEROCYST DIFFERENTIATION PROTEIN	ANABAENA SP	184-211	357-398	521-565						
PHEXA_STRPN	DNA MISMATCH REPAIR PROTEIN HEXA	STREPTOCOCCUS PNEUMONIAE	426-460								
PHEXB_STRPN	DNA MISMATCH REPAIR PROTEIN HEXB	STREPTOCOCCUS PNEUMONIAE	470-497								
PHFAB_CAUCR	POS TRANSACTIVATOR PROTEIN HFAB	CAULOBACTER CRESCENTUS	98-125								
PHFLC_ECOLI	HFLC PROTEIN	ESCHERICHIA COLI	113-140								
PHFLX_ECOLI	GTP-BINDING PROTEIN HFLX	ESCHERICHIA COLI	169-196								
PHIFQ_ECOLI	HIST FACTOR-I PROTEIN	ESCHERICHIA COLI	24-51								
PHIFC_HAEN	PILIATION PROTEIN HIFC PRECURSOR	HAEMOPHILUS INFLUENZAE	356-383	404-431	447-474						
PHIS2_LACLA	PHOSPHORIBOSYL-AMP CYCLOHYDROLASE	LACTOCOCCUS LACTIS	126-174								
PHIS4_ECOLI	P-3-A CARBOXAMIDE RIBOTIDE	ESCHERICHIA COLI	125-159								
PHIS4_LACLA	P-3-A CARBOXAMIDE RIBOTIDE	LACTOCOCCUS LACTIS	49-89	181-228							
PHIS4_METVA	P-3-A CARBOXAMIDE RIBOTIDE	METHANOCOCCUS VANNIELII	115-142								
PHIS4_SALTU	P-3-A CARBOXAMIDE RIBOTIDE	SALMONELLA TYPHIMURUM	125-159								
PHIS5_LACLA	AMIDOTRANSFERASE HISH	LACTOCOCCUS LACTIS	7-34								
PHIS6_ECOLI	HISF PROTEIN	ESCHERICHIA COLI	39-66	142-169							
PHIS6_SALTU	HISF PROTEIN	SALMONELLA TYPHIMURUM	39-66	142-169							
PHIS7_ECOLI	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	ESCHERICHIA COLI	168-199								
PHIS7_SALTU	IMIDAZOLEGLYCEROL-PHOSPHATE DEHYDRATASE	SALMONELLA TYPHIMURUM	161-199								
PHIS8_ECOLI	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	ESCHERICHIA COLI	290-317								
PHIS8_HAIYO	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	HALOBACTERIUM VOLCANII	174-201								
PHIS8_LACLA	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	LACTOCOCCUS LACTIS	161-188								
PHIS8_SALTU	HISTIDINOL-PHOSPHATE AMINOTRANSFERASE	SALMONELLA TYPHIMURUM	293-320								
PHISX_SALTU	HISTIDINE PERMEASE MEMBRANE Q PROTEIN	SALMONELLA TYPHIMURUM	8-35								
PHISX_ECOLI	HISTIDINOL DEHYDROGENASE	ESCHERICHIA COLI	393-434								
PHISX_LACLA	HISTIDINOL DEHYDROGENASE	LACTOCOCCUS LACTIS	19-46	264-303							
PHISX_MYCSM	HISTIDINOL DEHYDROGENASE	MYCOBACTERIUM SMEGMATIS	288-329	399-430							
PHISX_SALTU	HISTIDINOL DEHYDROGENASE	SALMONELLA TYPHIMURUM	393-434								
PHLA_STAAU	ALPHA-HEMOLYSIN PRECURSOR	STAPHYLOCOCCUS AUREUS	69-103								
PHLY1_ECOLI	HEMOLYSIN A, CHROMOSOMAL	ESCHERICHIA COLI	5-32	76-103	161-224	214-261	353-380	458-492	554-581	642-728	
PHLY2_ECOLI	HEMOLYSIN D, CHROMOSOMAL	ESCHERICHIA COLI	487-514								
PHLY4_ECOLI	HEMOLYSIN D, CHROMOSOMAL	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLYA_ACTPL	HEMOLYSIN	ACTINOBACILLUS PLEUROPNEUMONIAE	5-39	136-170	184-218	273-300	350-377	459-527	846-924		
PHLYA_ACTSU	HEMOLYSIN	ACTINOBACILLUS SUI	5-39	136-170	184-218	273-300	350-377	459-500	846-924		
PHLYA_ECOLI	HEMOLYSIN A, PLASMID	ESCHERICHIA COLI	5-32	76-103	161-262	354-381	452-493	555-582	643-729		
PHLYA_PROMI	HEMOLYSIN PRECURSOR	PROTEUS MIRABILIS	165-196	299-338	356-400	425-471	498-525	528-576	610-695	705-742	747-774
PHLYA_SERMA	HEMOLYSIN PRECURSOR	SERRATA MARCESCENS	789-823	841-868	966-993	1113-1140	1166-1193	1225-1273	1301-1342	1391-1461	1483-1527
			311-345	477-504	558-585	625-703	718-745	830-864	1081-1108	1155-1202	1249-1286
			1516-1553								
PHLYA_VIBCH	HEMOLYSIN PRECURSOR	VIBRIO CHOLERAE	335-369	618-665							
PHLYB_ACTPL	HAEMOLYSIN SECRETION PROTEIN	ACTINOBACILLUS PLEUROPNEUMONIAE	34-61								
PHLYB_ECOLI	HAEMOLYSIN SECRETION PROTEIN, PLASMID	ESCHERICHIA COLI	487-514								
PHLYB_PROMI	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	PROTEUS MIRABILIS	16-64	499-547							
PHLYB_PROVU	HAEMOLYSIN SECRETION PROTEIN	PROTEUS VULGARIS	34-68	487-514							
PHLYB_SERMA	HEMOLYSIN ACTIVATOR PROTEIN PRECURSOR	SERRATA MARCESCENS	110-137								
PHLYB_VIBCH	HEMOLYSIN SECRETION PROTEIN PRECURSOR	VIBRIO CHOLERAE	335-398	413-447	458-524						
PHLYC_ACTPL	HEMOLYSIN C	ACTINOBACILLUS PLEUROPNEUMONIAE	130-157								
PHLYD_ACTPL	HEMOLYSIN SECRETION PROTEIN APPD	ACTINOBACILLUS PLEUROPNEUMONIAE	191-311								
PHLYD_ECOLI	HEMOLYSIN D, PLASMID	ESCHERICHIA COLI	103-133	178-215	223-331						
PHLY_HALI7	HALOLYSIN PRECURSOR	HALOPHILIC BACTERIA STRAIN 172P1	484-516								
PHMCI_DESVH	41.2 KD PROTEIN IN HMC OPERON	DESULFOVIBRIO VULGARIS	156-186								
PHMD_METKA	H2O-FORMING DEHYDROGENASE	METHANOPYRUS KANDLERI	36-63								
PHNS_SERMA	DNA-BINDING PROTEIN H-NS	SERRATA MARCESCENS	35-62								
PHOLA_ECOLI	DNA POLYMERASE III DELTA SUBUNIT	ESCHERICHIA COLI	94-121	288-322							
PHOXA_BRAJA	REG PROTEIN HOXA	BRADYRHIZOBIUM JAPONICUM	113-163	444-471							
PHOXF_NOCOOP	HOXS ALPHA SUBUNIT	NOCARDIA OPACA	4-31								
PHOXQ_ALCEU	HOXQ PROTEIN	ALCALIGENES EUTROPHUS	76-110								

PCGENE	1071784	Prokaryotic Sequence	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM									
PHOXK_BRAJA	HOXX PROTEIN	BRADYRHIZOBIUM JAPONICUM	356-383								
PHPI_DEIRA	HEXAGONALLY SURFACE PROTEIN PRECURSOR	DEINOCOCCUS RADIOURANS	585-612								
PHPT_LACLA	PHOSPHONIBOSYLTRANSFERASE	LACTOCOCCUS LACTIS	3-39	71-105							
PHRD_STRCO	SIGMA FACTOR HRD	STREPTOMYCES COELICOLOR	296-323								
PHRP_BURSO	REGULATORY PROTEIN HRPB	BURKHOLDERIA SOLANACEARUM	371-405								
PHRS_PSEY	OUTER MEMBRANE PROTEIN HRPB PRECURSOR	PSEUDOMONAS SYRINGAE	102-129	310-344							
PHRS_PSEH	PROBABLE REGULATORY PROTEIN HRPB	PSEUDOMONAS SYRINGAE	24-51								
PHSB_CLOAB	18 KD HEAT SHOCK PROTEIN	CLOSTRIDIUM ACETOBYLICUM	67-108								
PHS7O_HALMA	HEAT SHOCK 70 KD PROTEIN	HALOARCTICULUM MARINORUM	522-576								
PHS7O_MYCLE	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM LIPMAI	461-488	501-510							
PHS7O_MYCPA	HEAT SHOCK 70 KD PROTEIN	MYCOBACTERIUM PARATUBERCULOSIS	460-487								
PHTR_ECOLI	HEAT SHOCK PROTEIN C62.5	ESCHERICHIA COLI	221-248	482-509							
PHTR_ECOLI	PROTEASE DO PRECURSOR	ESCHERICHIA COLI	373-400								
PHTR_ECOLI	HTRE PROTEIN PRECURSOR	ESCHERICHIA COLI	454-484	524-576							
PHTR_HALHA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM HALOBILIUM	413-471	479-506							
PHTR_HALSA	SENSORY RHODOPSIN I TRANSDUCER	HALOBACTERIUM SALINARIUM	114-149	413-471							
PHUTP_BACSU	HIUT OPERON POSITIVE REGULATORY PROTEIN	BACILLUS SUBTILIS	5-36		479-506						
PHVTI_LACIE	HELVEICIN I	LACTOBACILLUS HELVETICUS	174-212	306-333							
PHYCA_ECOLI	FORMATE HYDROGENLYASE SUBUNIT I	ESCHERICHIA COLI	73-100	106-133							
PHYDG_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	ESCHERICHIA COLI	251-278								
PHYDG_SALTY	TRANSCRIPTIONAL REGULATORY PROTEIN HYDG	SALMONELLA TYPHIMURUM	251-278								
PHYDH_ECOLI	SENSOR PROTEIN HYDH	ESCHERICHIA COLI	312-339	306-387							
PHYUB_PSEN	HYDANTOIN UTILIZATION PROTEIN B	PSEUDOMONAS SP	534-581								
PHYUC_PSEN	HYDANTOIN UTILIZATION PROTEIN	PSEUDOMONAS SP	6-40	96-123							
PIAAL_PSEH	INDOLEACETATE-LYSINE LIGASE	PSEUDOMONAS SYRINGAE	133-160	297-331							
PIAP_ECOLI	ALK PHOS ISOZYME CONVERSION PROTEIN	ESCHERICHIA COLI	74-101								
PIEN_ERWAN	ICE NUCLEATION PROTEIN	ERWINIA ANANAS	326-353	422-449	534-561	614-641	662-689	721-748	758-785	854-881	950-977
PIEN_ERWHE	ICE NUCLEATION PROTEIN	ERWINIA HERBICOLA	1046-1073								
PIEN_PSEFL	ICE NUCLEATION PROTEIN	PSEUDOMONAS FLUORESCENS	310-337	406-433	534-561	646-673	694-721	838-865	886-913	982-1009	
PIEN_PSEY	ICE NUCLEATION PROTEIN	PSEUDOMONAS SYRINGAE	281-308	377-404	425-452	681-708	729-781	795-852			
PIEN_XANCT	ICE NUCLEATION PROTEIN	XANTHOMONAS CAMPESSTRIS	564-602	772-847	868-895	909-943					
PICSB_SHUFL	INTERCELLULAR SPREAD PROTEIN	SHIGELLA FLEXNERI	496-534	555-582	1168-1204	1248-1275					
PIE2_BACST	INITIATION FACTOR IF-2	BACILLUS STEAROTHERMOPHILUS	41-105	438-467							
PIE2_BACSU	INITIATION FACTOR IF-2	BACILLUS SUBTILIS	540-567	681-708							
PIE2_ECOLI	INITIATION FACTOR IF-2	ESCHERICHIA COLI	173-208	394-421							
PIE2_ENTFC	INITIATION FACTOR IF-2	ENTEROCOCCUS FAECIUM	686-724	835-862							
PIE2_BACST	INITIATION FACTOR IF-3	BACILLUS STEAROTHERMOPHILUS	579-627								
PIE2_ECOLI	INITIATION FACTOR IF-3	ESCHERICHIA COLI	7-34								
PIE2_KLEPN	INITIATION FACTOR IF-3	KLEBSIELLA PNEUMONIAE	27-54	70-97							
PIE2_MYCFE	INITIATION FACTOR IF-3	MYCOPLASMA FERMENTANS	27-54	70-97							
PIE2_PROVU	INITIATION FACTOR IF-3	PROTEUS VULGARIS	2-29	70-97							
PIE2_SALTY	INITIATION FACTOR IF-3	SALMONELLA TYPHIMURUM	27-54	70-97							
PIE2_SERMA	INITIATION FACTOR IF-3	SERRATIA MARCESCENS	19-46	70-97							
PIGA_NEIGO	IGA-SPECIFIC SERINE ENDOPEPTIDASE	NEISSERIA GONORRHOEAE	245-272	287-314	833-860	1024-1058	1377-1404	1483-1531			
PIGBB_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	195-222						
PIGGG_STRSP	IGG BINDING PROTEIN PRECURSOR	STREPTOCOCCUS SP	46-76	120-150	195-225	270-297					
PILVH_ECOLI	ACETOLACTATE SYNTHASE	ESCHERICHIA COLI	47-81	120-147							
PILVH_SALTY	ACETOLACTATE SYNTHASE	SALMONELLA TYPHIMURUM	47-81	120-147							
PILVH_LACLA	ACETOLACTATE SYNTHASE	LACTOCOCCUS LACTIS	20-75								
PIMPB_SALTY	IMPB PROTEIN	SALMONELLA TYPHIMURUM	185-212								
PIMP_ACICA	INOSINE-5-MONOPHOSPHATE DEHYDROGENASE	ACINETOBACTER CALCOACETICUS	166-193								
PIMP_BACSU	E-5-MONOPHOSPHATE DEHYDROGENASE	BACILLUS SUBTILIS	159-186								
PINA_BACGL	IMMUNE INHIBITOR A PRECURSOR	BACILLUS THURINGIENSIS	103-130	324-358							
PINLA_LISMO	INTERNALIN A	LISTERIA MONOCYTOGENES	106-143	161-188	196-232						
PINLB_LISMO	INTERNALIN B PRECURSOR	LISTERIA MONOCYTOGENES	53-94	166-200	385-415						
PINVA_YEREN	INVASIN	YERSINIA ENTEROCOLITICA	501-535								

PCGENE	10717844	Prokaryotic Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIPA7_SHIFL	60 KD ANTIGEN	SHIGELLA FLEXNERI	285-312	437-475	493-557	596-630					
PIPA8_SHIFL	70 KD ANTIGEN	SHIGELLA FLEXNERI	95-136	71-169	480-507	522-556					
PIPA9_SHIFL	62 KD MEMBRANE ANTIGEN	SHIGELLA DYSENTERIAE	28-55	71-169	480-507	522-556					
PIPA10_SHIFL	62 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	28-55	71-169	480-507	522-556					
PIPA11_SHIFL	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA DYSENTERIAE	21-57	113-161	273-300	324-378					
PIPA12_SHIFL	42 KD MEMBRANE ANTIGEN PRECURSOR	SHIGELLA FLEXNERI	28-57	113-161	273-300	324-378					
PIPA13_SHIFL	37 KD MEMBRANE ANTIGEN IPAD	SHIGELLA DYSENTERIAE	47-86	291-318							
PIPA14_SHIFL	36 KD MEMBRANE ANTIGEN	SHIGELLA FLEXNERI	47-86	259-286	291-318						
PIPA15_SHIFL	IPGB PROTEIN	SHIGELLA DYSENTERIAE	175-202								
PIPA16_SHIFL	IPGB PROTEIN	SHIGELLA FLEXNERI	175-202								
PIPA17_SHIFL	ISOPENTENYL TRANSFERASE	SHIGELLA FLEXNERI	53-87	143-173							
PIPA18_SHIFL	INORGANIC PYROPHOSPHATASE	PSEUDOMONAS SYRINGAE	138-172								
PIPA19_SHIFL	VRULENCE PROTEIN PRECURSOR	ESCHERICHIA COLI	212-239	336-377							
PIPA20_SHIFL	VRULENCE REGULATORY PROTEIN IRGB	VIBRIO CHOLERAE	67-97								
PIPA21_SHIFL	IRON-REGULATED PROTEIN A	SYNECHOCOCUS SP	167-194								
PIPA22_SHIFL	INSERTION ELEMENT ISO-151D PROTEIN INSB	SHIGELLA DYSENTERIAE	86-113								
PIPA23_SHIFL	INSERTION ELEMENT ISO-151D PROTEIN INSB	SHIGELLA DYSENTERIAE	6-37								
PIPA24_SHIFL	INSERTION ELEMENT ISO-151D PROTEIN INSB	ESCHERICHIA COLI	122-149								
PIPA25_SHIFL	INSERTION ELEMENT ISO-151D PROTEIN INSB	SHIGELLA FLEXNERI	86-113								
PIPA26_SHIFL	INSERTION ELEMENT ISO-151D PROTEIN INSB	SHIGELLA SONNEI	86-113								
PIPA27_SHIFL	MAJOR INTRACELLULAR SERINE PROTEASE	BACILLUS SUBTILIS	115-142	197-224	233-280						
PIPA28_SHIFL	INTRACELLULAR SERINE PROTEASE	BACILLUS POLYMYXA	109-143								
PIPA29_SHIFL	ISTA PROTEIN	ESCHERICHIA COLI	183-210								
PIPA30_SHIFL	ISTA PROTEIN	SHIGELLA SONNEI	183-210								
PIPA31_SHIFL	FERRIC AEROBACTIN RECEPTOR PRECURSOR	ESCHERICHIA COLI	186-213	525-552	559-593						
PIPA32_SHIFL	JAG PROTEIN	BACILLUS SUBTILIS	68-95								
PIPA33_SHIFL	6-PHOSPHOFRUCTOKINASE ISOZYME 2	ESCHERICHIA COLI	143-170								
PIPA34_SHIFL	ADENYLATE KINASE	BACILLUS SUBTILIS	188-215								
PIPA35_SHIFL	ADENYLATE KINASE	LACTOCOCCUS LACTIS	186-213								
PIPA36_SHIFL	KANAMYCIN NUCLEOTIDYL TRANSFERASE	BACILLUS SP	69-96								
PIPA37_SHIFL	KANAMYCIN NUCLEOTIDYL TRANSFERASE	STAPHYLOCOCCUS AUREUS	69-96								
PIPA38_SHIFL	2-KETO-3-DEOXYGLUCONATE PERMEASE	ESCHERICHIA COLI	70-97								
PIPA39_SHIFL	2-KETO-3-DEOXYGLUCONATE PERMEASE	ERWINIA CHRYSANTHEMI	126-153								
PIPA40_SHIFL	3-DEOXY-D-MANNANO-OCTULOSONIC-ACID TRANS	ESCHERICHIA COLI	369-396								
PIPA41_SHIFL	ALPHA-KETOGLUTARATE PERMEASE	ESCHERICHIA COLI	7-34								
PIPA42_SHIFL	GUANYLATE KINASE	ESCHERICHIA COLI	162-189								
PIPA43_SHIFL	HOMOSERINE KINASE	BACILLUS SUBTILIS	49-76								
PIPA44_SHIFL	HOMOSERINE KINASE	FREMYELLA DIPLOPHON	52-79								
PIPA45_SHIFL	AMINOGLYCOSIDE 3'-PHOSPHOTRANSFERASE	BACILLUS CIRCULANS	12-39								
PIPA46_SHIFL	KORR TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	228-255								
PIPA47_SHIFL	PYRUVATE KINASE	SPIROPLASMA CITRI	112-148								
PIPA48_SHIFL	PYRUVATE KINASE	BACILLUS STEAROTHERMOPHILUS	331-374								
PIPA49_SHIFL	ISOMERASE LACA SUBUNIT	STAPHYLOCOCCUS AUREUS	9-64								
PIPA50_SHIFL	ISOMERASE LACA SUBUNIT	STREPTOCOCCUS MUTANS	26-60								
PIPA51_SHIFL	TAGATOSE-6-PHOSPHATE KINASE	STREPTOCOCCUS MUTANS	56-83	283-310							
PIPA52_SHIFL	6-PHOSPHO-BETA-GALACTOSIDASE	LACTOBACILLUS CASEI	290-317								
PIPA53_SHIFL	LACTOSE OPERON REPRESSOR	ESCHERICHIA COLI	9-36								
PIPA54_SHIFL	LACTOSE OPERON REPRESSOR	KLEBSIELLA PNEUMONIAE	195-229								
PIPA55_SHIFL	PHOSPHOTRANSFERASE REPRESSOR	STAPHYLOCOCCUS AUREUS	2-29								
PIPA56_SHIFL	PHOSPHOTRANSFERASE REPRESSOR	STREPTOCOCCUS MUTANS	2-32								
PIPA57_SHIFL	LACTOSE PERMEASE	LACTOBACILLUS DELBRUECKII	196-230								
PIPA58_SHIFL	FLAGELLAR HOOK-ASSOCIATED PROTEIN 2	VIBRIO PARAHAEEMOLYTICUS	62-89	388-415							
PIPA59_SHIFL	MALTOSEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	337-364								
PIPA60_SHIFL	ENDO-1,3(4)-BETA-GLUCANASE PRECURSOR	CLOSTRIDIUM THERMOCILLUM	132-159								
PIPA61_SHIFL	OHHL SYNTHESIS PROTEIN LASI	PSEUDOMONAS AERUGINOSA	171-198								
PIPA62_SHIFL	PROBABLY LEUCOCYTOXIN IMMUNITY PROTEIN	LEUCONOSTOC GELIDUM	41-71								
PIPA63_SHIFL	LACTOCOCCIN A SECRETION PROTEIN LONC	LACTOCOCCUS LACTIS	162-189	207-234	388-433						

PCGENE	1071178.4	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILENAME	PROTEIN	ORGANISM									
PLCND_LACLA	LACTOCOCCIN A SECRETION PROTEIN LCND	LACTOCOCCUS LACTIS	99-126	140-202	237-307						
PLCRD_YEREN	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA ENTEROCOLITICA	122-149	491-518							
PLCRD_YERPE	LOW CALCIUM RESPONSE LOCUS PROTEIN D	YERSINIA PESTIS	122-149	491-518							
PLCKV_YERPE	VRULANCE-ASSOCIATED V ANTIGEN	YERSINIA PESTIS	22-49	157-184	240-267						
PLCKV_YERPS	VRULANCE-ASSOCIATED V ANTIGEN	YERSINIA PSEUDOTUBERCULOSIS	22-49	240-267							
PLCTB_BACCA	LCTB PROTEIN	BACILLUS CALDOTTENAX	18-45								
PLCTB_BACST	LCTB PROTEIN	BACILLUS STEAROTHERIOPHILUS	14-45								
PLDID_LACPL	D-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	51-81								
PLDHP_BACPS	L-LACTATE DEHYDROGENASE P	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-272	279-306						
PLDHP_BACPS	L-LACTATE DEHYDROGENASE X	BACILLUS PSYCHROSACCHAROLYTICUS	2-43	241-272	279-306						
PLDHP_BACME	L-LACTATE DEHYDROGENASE	BACILLUS MEGATERIUM	244-274								
PLDHP_BACST	L-LACTATE DEHYDROGENASE	BACILLUS STEAROTHERIOPHILUS	241-268	279-313							
PLDHP_BIFLO	L-LACTATE DEHYDROGENASE	BIFIDOBACTERIUM LONGUM	22-49	240-267							
PLDHP_LACPL	L-LACTATE DEHYDROGENASE	LACTOBACILLUS PLANTARUM	197-231								
PLDHP_LISMO	L-LACTATE DEHYDROGENASE	LISTERIA MONOCYTOGENES	42-69								
PLDHP_MYCHY	L-LACTATE DEHYDROGENASE	MYCOPLASMA HYOPNEUMONIAE	276-310								
PLDHP_THAQ	L-LACTATE DEHYDROGENASE	THERMUS AQUATICUS	3-30								
PLEF_BACAN	LETHAL FACTOR PRECURSOR	BACILLUS ANTHRACIS	165-192	304-331	480-514	548-578	619-658	737-764			
PLEPA_PSEFL	LEPA PROTEIN	PSEUDOMONAS FLUORESCENS	23-30								
PLEP_BACSU	SIGNAL PEPTIDASE I	BACILLUS SUBTILIS	3-30								
PLEUJ_ECOLI	2-ISOPROPYLMALATE SYNTHASE	ESCHERICHIA COLI	437-464								
PLEUJ_LAGLA	2-ISOPROPYLMALATE SYNTHASE	LACTOCOCCUS LACTIS	22-49	379-484							
PLEUJ_BACCO	3-ISOPROPYLMALATE DEHYDROGENASE	BACILLUS COAGULANS	331-358								
PLEUJ_CLOPA	3-ISOPROPYLMALATE DEHYDROGENASE	CLOSTRIDIUM PASTEURIANUM	183-212								
PLEUJ_LACLA	3-ISOPROPYLMALATE DEHYDRATASE	LACTOCOCCUS LACTIS	163-190								
PLEVR_BACSU	TRANSCRIPTIONAL REGULATORY PROTEIN LEVR	BACILLUS SUBTILIS	297-324	676-703	744-774	785-822					
PLEXA_ERWCA	LEXA REPRESSOR	ERWINIA CAROTOVORA	146-173								
PLIPT_MORSP	LIPASE 1	MORAXELLA SP	26-53								
PLIPT_MORSP	LIPASE 2	MORAXELLA SP	356-383								
PLIPB_ECOLI	LIPB PROTEIN	ESCHERICHIA COLI	66-93								
PLIPB_EURCE	LIPASE PRECURSOR	BURKHOLDERIA CEPACIA	176-203								
PLIP_PSEFL	LIPASE PRECURSOR	PSEUDOMONAS FLUORESCENS	8-35								
PLIP_PSESI	LIPASE PRECURSOR	PSEUDOMONAS SP	176-203								
PLIP_STAAN	LIPASE PRECURSOR	STAPHYLOCOCCUS AUREUS	80-146	512-546							
PLIVB_SALTY	LEU/LEVAL/THR-BINDING PROTEIN PRECURSOR	SALMONELLA TYPHIMURIUM	193-220								
PLIVC_SALTY	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	195-222								
PLIVE_SALTY	AMINO ACID TRANSPORT PROTEIN LIVE	SALMONELLA TYPHIMURIUM	121-148								
PLIVF_ECOLI	AMINO ACID TRANSPORT PROTEIN LIVF	ESCHERICHIA COLI	23-50								
PLIVJ_CITFR	LEU/LEVAL-BINDING PROTEIN PRECURSOR	CITROBACTER FREUNDII	195-222								
PLIVJ_ECOLI	LEU/LEVAL-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222								
PLIVM_ECOLI	LEUCINE-SPECIFIC BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	195-222								
PLKTA_ACTAC	LEUKOTOXIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	121-148								
PLKTA_PASHA	LEUKOTOXIN	PASTURELLA HAEMOLYTICA	113-147	173-213	398-443	451-488	593-620	655-711			
PLKTB_ACTAC	LEUKOTOXIN SECRETION PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	53-99	179-216	345-372	409-436	455-482	496-530	545-572	811-838	853-926
PLKTB_PASHA	LEUKOTOXIN SECRETION PROTEIN	PASTURELLA HAEMOLYTICA	42-69	78-105	488-515						
PLKTC_ACTAC	LTC PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	58-85	116-150							
PLKTC_PASHA	LKTC PROTEIN	PASTURELLA HAEMOLYTICA	123-157								
PLKTD_ACTAC	LKTD PROTEIN	ACTINOBACILLUS ACTINOMYCETEMCOMITANS	116-164	205-242	278-305	364-391					
PLKTD_PASHA	LKTD PROTEIN	PASTURELLA HAEMOLYTICA	184-289								
PLON_ECOLI	ATP-DEPENDENT PROTEASE LA	ESCHERICHIA COLI	121-148								
PLPXA_RUCRI	UDP-N-ACETYLGLUCOSAMINE ACYLTRANSFERASE	RICKETTSIA RICKETTSII	229-256								
PLSPA_ECOLI	LIPROTEIN SIGNAL PEPTIDASE	ESCHERICHIA COLI	10-37								
PLSPA_STAAN	LIPROTEIN SIGNAL PEPTIDASE	STAPHYLOCOCCUS AUREUS	134-161								
PLIKF_STAAN	LEUKOCIDIN F SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	161-195								
PLIKS_STAAN	LEUKOCIDIN S SUBUNIT PRECURSOR	STAPHYLOCOCCUS AUREUS	157-207								

PCGENE	1071784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PLUXA_KRYAL	ALKANAL MONOOXYGENASE ALPHA CHAIN	KRYPTOPHANARON ALFREDI	190-217								
PLUXB_POPO	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM PHOSPHOREUM	188-217	257-291							
PLUXB_VIBHA	ALKANAL MONOOXYGENASE BETA CHAIN	VIBRIO HARVEYI	373-400								
PLUXC_PHOLE	ACYL-COA REDUCTASE	PHOTOBACTERIUM LEIOGNATHI	44-81								
PLUXC_POPO	ACYL-COA REDUCTASE	PHOTOBACTERIUM PHOSPHOREUM	54-91								
PLUXC_VIBFI	ACYL-COA REDUCTASE	VIBRIO FISCHERI	16-63								
PLUXC_XENLU	ACYL-COA REDUCTASE	XENORHABDUS LUMINESCENS	39-69								
PLUXD_PHOLE	ACYL TRANSFERASE	PHOTOBACTERIUM LEIOGNATHI	89-119	218-245							
PLUXE_VIBHA	LUCIFERIN-COMPONENT LIGASE	VIBRIO HARVEYI	30-57								
PLUXF_PHOLE	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM LEIOGNATHI	145-172								
PLUXF_POPO	NON-FLUORESCENT FLAVOPROTEIN	PHOTOBACTERIUM PHOSPHOREUM	37-85	99-126							
PLUXG_VIBFI	PROBABLE FLAVIN REDUCTASE	VIBRIO FISCHERI	137-168								
PLUXH_VIBHA	LUXH PROTEIN	VIBRIO HARVEYI	96-123								
PLUXI_VIBFI	OHHL SYNTHESIS PROTEIN LUXI	VIBRIO FISCHERI	30-38								
PLUXJ_VIBFI	OHHL SYNTHESIS PROTEIN LUXJ	VIBRIO FISCHERI	30-57								
PLUXP_POPO	LUMAZINE PROTEIN	PHOTOBACTERIUM PHOSPHOREUM	51-85	162-189							
PLUXR_VIBHA	LUXR REGULATORY PROTEIN	VIBRIO HARVEYI	61-88								
PLXB1_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	268-295								
PLXB2_PHOLE	ALKANAL MONOOXYGENASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHI	228-255								
PLYB_BACSU	B-ENZYME	BACILLUS SUBTILIS	87-114								
PLYC_CLOAB	AUTOLYTIC LYSOZYME	CLOSTRIDIUM ACETOBUTYLICUM	91-118								
PLYSP_ECOLI	LYSINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	142-176								
PLYTB_BACSU	AMIDASE ENHANCER PRECURSOR	BACILLUS SUBTILIS	55-82	150-177	467-513	555-585					
PLYTB_ECOLI	LYTB PROTEIN	ESCHERICHIA COLI	210-237								
PLYTC_BACSU	AMIDASE PRECURSOR	BACILLUS SUBTILIS	179-213	225-252							
PLYTR_BACSU	MEMBRANE-BOUND PROTEIN LYTR	BACILLUS SUBTILIS	13-64	259-303							
PM12_STRPY	M PROTEIN, SEROTYPE 12 PRECURSOR	STREPTOCOCCUS PYOGENES	46-92	114-156	191-300	305-342	383-417	436-494			
PM24_STRPY	M PROTEIN, SEROTYPE 24 PRECURSOR	STREPTOCOCCUS PYOGENES	12-46	89-128	175-202	245-272	280-313	399-457			
PM49_STRPY	M PROTEIN, SEROTYPE 49 PRECURSOR	STREPTOCOCCUS PYOGENES	12-174	269-327							
PM5_STRPY	M PROTEIN, SEROTYPE 5 PRECURSOR	STREPTOCOCCUS PYOGENES	5-39	56-263	306-333	352-410					
PM6_STRPY	M PROTEIN, SEROTYPE 6 PRECURSOR	STREPTOCOCCUS PYOGENES	12-39	70-282	290-324	343-401					
PMAL1_ECOLI	MALTOSE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	20-47								
PMAL2_ENTAE	MALTOSE-BINDING PROTEIN PRECURSOR	ENTEROBACTER AEROGES	20-47								
PMALK_ENTAE	INNER MEMBRANE PROTEIN MALK	ENTEROBACTER AEROGES	3-30								
PMALT_ECOLI	MALT REGULATORY PROTEIN	ESCHERICHIA COLI	832-879								
PMALX_STRPN	MALX PROTEIN PRECURSOR	STREPTOCOCCUS PNEUMONIAE	40-67	180-207							
PMANB_BACSM	1,4-BETA-MANNOSIDASE A AND B PREC	BACILLUS SP	410-441								
PMANB_CALSA	B-MANNANASE/DOGLUCANASE A PREC	CALDOCELLUM SACCHAROLYTICUM	389-423	592-626	1222-1256	1296-1323					
PMAXO_BACST	MALATE OXIDOREDUCTASE	BACILLUS STEAROTIERNOPHILUS	246-273								
PMARR_ECOLI	ANTIBIOTIC RESISTANCE PROTEIN MARR	ESCHERICHIA COLI	95-122								
PMBBB_ECOLI	MOBILIZATION PROTEIN MBEB	ESCHERICHIA COLI	38-65	100-134							
PMIIIH_WOLSI	QUINONE:RIAC NITE-HYDROGENASE	WOLINELLA SUCCINOGENIS	440-471								
PMCB8_ECOLI	MCBB PROTEIN	ESCHERICHIA COLI	47-74	122-163							
PMCB9_ECOLI	MCBB PROTEIN	ESCHERICHIA COLI	172-206	226-253	306-345						
PMCP1_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN I	ESCHERICHIA COLI	272-299								
PMCP2_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	ESCHERICHIA COLI	258-306								
PMCP2_SALT	METHYL-ACCEPTING CHEMOTAXIS PROTEIN II	SALMONELLA TYPHIMURUM	258-306								
PMCP3_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN III	ESCHERICHIA COLI	288-315								
PMCP4_ECOLI	METHYL-ACCEPTING CHEMOTAXIS PROTEIN IV	ESCHERICHIA COLI	111-145	164-191	277-304						
PMCPA_CALICR	CHEMORECEPTOR MCPA	CALOBACTER CRESCENTUS	260-287	369-403	516-543						
PMCPG_SALT	CHEMOTAXIS CITRATE TRANSDUCER	SALMONELLA TYPHIMURUM	314-348								
PMCPD_ENTAE	CHEMOTAXIS ASPARTATE TRANSDUCER	ENTEROBACTER AEROGES	275-302								
PMCP5_ENTAE	CHEMOTAXIS SERINE TRANSDUCER	ENTEROBACTER AEROGES	41-68	158-208	317-351	488-522					
PMCR1_ECOLI	SPECIFIC RESTRICTION ENZYME A	ESCHERICHIA COLI	37-71								
PMCR2_METBA	METHYL-COENZYME M REDUCTASE	METHANOSARCINA BARKERII	375-405								
PMCR3_METVA	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VANNIELII	335-362								
PMCR4_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCUS VOLTAE	336-363								

PCGENE	1071784d	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM									
PMCRB_METFE	METHYL-COENZYME M REDUCTASE	METHANOTHERMUS FERVIDUS	267-294								
PMCRB_METVO	METHYL-COENZYME M REDUCTASE	METHANOCOCCLUS VOLTAE	247-274								
PMCRB_ECOLI	MCRG PROTEIN	ESCHERICHIA COLI	111-145								
PMCRD_METVO	REDUCTASE OPERON PROTEIN D	METHANOCOCCLUS VOLTAE	54-91								
PMNDH_ECOLI	MALATE DEHYDROGENASE	ESCHERICHIA COLI	127-154								
PMNDH_METFE	MALATE DEHYDROGENASE	METHANOTHERMUS FERVIDUS	54-88								
PMNDH_SALTY	MALATE DEHYDROGENASE	SALMONELLA TYPHIMURIUM	127-154								
PMNDL_ECOLI	MDL PROTEIN	ESCHERICHIA COLI	464-491	684-711	992-1019						
PMNDH_ECOLI	BIOSYNTHESIS PROTEIN MDOH	ESCHERICHIA COLI	119-152								
PMECI_STAEP	METHICILLIN RESIS REG PROTEIN MECI	STAPHYLOCOCCUS	88-122								
PMECR_STAEP	METHICILLIN RESISTANCE MECRI PROTEIN	STAPHYLOCOCCUS	439-495	546-573							
PMEMB_METCA	METHANE MONOOXYGENASE COMPONENT A	EPIDERMIDIS & AUREUS									
PMEMB_METTR	METHANE MONOOXYGENASE COMPONENT A	METHYLOCOCCUS CAPSULATUS	214-248								
PMEND_ECOLI	SHHC SYNTHASE	METHYLOCOCCUS TRICHOSPORIUM	321-348								
PMER4_STRLI	PROBABLE HG TRANSPORT PROTEIN	ESCHERICHIA COLI	333-367								
PMERA_BACSR	MERCURIC REDUCTASE	STREPTOMYCES LIVIDANS	159-186								
PMERA_STAAR	MERCURIC REDUCTASE	BACILLUS SP	146-180								
PMERR_STAAR	MERCURIC RESISTANCE OPERON REG PROTEIN	STAPHYLOCOCCUS AUREUS	292-347	352-386							
PMETB_ECOLI	CYSTATHIONINE GAMMA-SYNTHASE	STAPHYLOCOCCUS AUREUS	86-113								
PMETC_ECOLI	CYSTATHIONINE BETA-LYASE	ESCHERICHIA COLI	356-383								
PMETC_SALTY	CYSTATHIONINE BETA-LYASE	ESCHERICHIA COLI	363-390								
PMETE_ECOLI	METHIONINE SYNTHASE	SALMONELLA TYPHIMURIUM	2-29								
PMETH_ECOLI	METHIONINE SYNTHASE	ESCHERICHIA COLI	448-482								
PMFD_ECOLI	TRANSCRIPTION-REPAIR COUPLING FACTOR	ESCHERICHIA COLI	371-398	642-676							
PMGLA_ECOLI	GALACTOSIDE-BINDING PROTEIN	ESCHERICHIA COLI	185-212								
PMINC_BACSU	SEPTUM SITE-DETERMINING PROTEIN MNC	ESCHERICHIA COLI	62-89	312-380							
PMIOC_ECOLI	MIOC PROTEIN	BACILLUS SUBTILIS	65-122								
PMIP_CHLTR	27 KD MEMBRANE PROTEIN PRECURSOR	ESCHERICHIA COLI	102-129								
PMIP_LEGMI	OUTER MEMBRANE PROTEIN MIP PRECURSOR	CHLAMYDIA TRACHOMATIS	41-75								
PMLS1_ENTFA	RNA ADENINE N-6-METHYLTRANSFERASE	LEGIONELLA MICDADEI	106-133								
PMLS1_STAAR	RNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLS2_ENTFA	RNA ADENINE N-6-METHYLTRANSFERASE	STAPHYLOCOCCUS AUREUS	9-47								
PMLSB_BACFR	RNA ADENINE N-6-METHYLTRANSFERASE	ENTEROCOCCUS FAECALIS	4-81	120-154							
PMLSB_ECOLI	RNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMLSB_STRPN	RNA ADENINE N-6-METHYLTRANSFERASE	ESCHERICHIA COLI	4-81	120-154							
PMLSB_STRSA	RNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS PNEUMONIAE	4-81	120-154							
PMLSB_STRSA	RNA ADENINE N-6-METHYLTRANSFERASE	STREPTOCOCCUS SANGUIS	4-81	120-154							
PMISC_BACFR	RNA ADENINE N-6-METHYLTRANSFERASE	BACTEROIDES FRAGILIS	16-43								
PMNBI_METC	METHANE MONOOXYGENASE REG PROTEIN B	METHYLOCOCCUS CAPSULATUS	34-64								
PMOAB_ECOLI	MOLYBD COFAC BIOSYN PROTEIN B	ESCHERICHIA COLI	49-76								
PMOBA_THIFE	MOBA PROTEIN	THIOBACILLUS FERROOXIDANS	94-121	251-278							
PMOIC_THIFE	MOIC PROTEIN	THIOBACILLUS FERROOXIDANS	20-47								
PMOBD_THIFE	MOBD PROTEIN	THIOBACILLUS FERROOXIDANS	95-132								
PMOB_ECOLI	MOB PROTEIN	ESCHERICHIA COLI	45-72								
PMOEA_ECOLI	MOLYBDOTRIN BIOSYNTHESIS MOEA PROTEIN	ESCHERICHIA COLI	243-270								
PMOPT_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN I	CLOSTRIDIUM PASTEURIANUM	26-53								
PMOP2_CLOPA	MOLYBDENUM-PTERIN BINDING PROTEIN II	CLOSTRIDIUM PASTEURIANUM	26-64								
PMOXY_PARDI	METHANOL UTIL CONT PROTEIN MOXY	PARACOCCLUS DENITRIFICANS	200-234	307-314							
PMPEV_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEV	SYNECHOCOCCUS SP	2-36	80-107	198-225						
PMPEV_SYNPY	BILIN BIOSYNTHESIS PROTEIN MPEV	SYNECHOCOCCUS SP	2-31	175-216							
PMRA_ECOLI	MRA PROTEIN	ESCHERICHIA COLI	136-163								
PMRAY_BACSU	PENTAPEPTIDE-TRANSFERASE	BACILLUS SUBTILIS	106-133								
PMREB_BACCE	ROD SHAPE-DETERMINING PROTEIN MREB	BACILLUS CEREUS	186-213	247-281							
PMREC_BACSU	ROD SHAPE-DETERMINING PROTEIN MREC	BACILLUS SUBTILIS	65-112								
PMRKB_KLEPN	CHAPERONE PROTEIN MRKB PRECURSOR	KLEBSIELLA PNEUMONIAE	198-232								
PMRKC_KLEPN	MRKC PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	55-82	452-489	592-622						

PCGENE	1071784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM									
PKRD_KLEPN	FIMBRIA ADHESIN PROTEIN PRECURSOR	KLEBSIELLA PNEUMONIAE	222-268								
PKRKE_KLEPN	MRKE PROTEIN	KLEBSIELLA PNEUMONIAE	193-220								
PWRP4_STRPY	FIBRINOGEN- / TG-BINDING PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	7-46	99-310							
PWRP4_STRPY	MURAMIDASE-RELEASED PROTEIN PRECURSOR	STREPTOCOCCUS PYOGENES	75-102	130-177							
PMSBA_ECOLI	PROB ATP-BINDING TRANSPORT PROTEIN MSBA	ESCHERICHIA COLI	116-150	412-449							
PMSBA_STAEP	ERYTHROMYCIN RESISTANCE PROTEIN	ESCHERICHIA COLI	174-223	323-350							
PMSYB_ECOLI	ACIDIC PROTEIN MSYB	ESCHERICHIA COLI	73-100								
PMT37_ECOLI	MODIFICATION METHYLASE ECOS7I	ESCHERICHIA COLI	250-284	474-544							
PMTAL_ACICA	MODIFICATION METHYLASE ACCI	ACINETOBACTER CALCOACETICUS	503-540								
PMTAB_SYN2	MODIFICATION METHYLASE AQUI BETA SUBUNIT	SYNECHOCOCUS SP	19-46								
PMTB1_BREEP	MODIFICATION METHYLASE BEPI	BREVIBACTERIUM EPIDERMIDIS	166-200	309-336							
PMTB1_HERAU	MODIFICATION METHYLASE HGIBI	HERPETOSEPHON AURANTIACUS	281-308								
PMTB2_BACAM	MODIFICATION METHYLASE BAMHII	BACILLUS AMYLOLIQUEFACIENS	35-62								
PMTB3_BACAR	MODIFICATION METHYLASE BANIII	BACILLUS ANEURINOLYTICUS	184-211								
PMTB4_BACAR	MODIFICATION METHYLASE BANII	BACILLUS ANEURINOLYTICUS	121-148	382-409							
PMTB5_BACSU	MODIFICATION METHYLASE BSUBI	BACILLUS SUBTILIS	231-258	467-496							
PMTB6_BACSU	MODIFICATION METHYLASE BSUFI	BACILLUS SUBTILIS	208-235		252-279						
PMTB7_BACSU	MODIFICATION METHYLASE CFBI	CITROBACTER FREUNDII	2-36	55-82							
PMTB8_BACSU	MODIFICATION METHYLASE HGICI	HERPETOSEPHON AURANTIACUS	120-147								
PMTB9_BACSU	MODIFICATION METHYLASE HGICII	HERPETOSEPHON AURANTIACUS	281-311								
PMTB10_BACSU	MODIFICATION METHYLASE HGICIII	ESCHERICHIA COLI	76-110	145-172							
PMTB11_BACSU	MODIFICATION METHYLASE HGICIV	HERPETOSEPHON AURANTIACUS	281-308								
PMTB12_BACSU	MODIFICATION METHYLASE ECORII	ESCHERICHIA COLI	4-61								
PMTB13_BACSU	MODIFICATION METHYLASE ECO RV	ESCHERICHIA COLI	73-100								
PMTB14_BACSU	MODIFICATION METHYLASE ECAI	ENTEROBACTER CLOACAE	418-445								
PMTB15_BACSU	MODIFICATION METHYLASE FOKI	FLAYOBACTERIUM OKEANOKOITES	184-211	279-306	337-366	398-425	555-646				
PMTB16_BACSU	MODIFICATION METHYLASE FNUII	FUSOBACTERIUM NUCLEATUM	22-49								
PMTB17_BACSU	MODIFICATION METHYLASE HGAI-2	HAEMOPHILUS GALLINARUM	135-165								
PMTB18_BACSU	MODIFICATION METHYLASE HNCII	HAEMOPHILUS INFLUENZAE	181-208	399-426							
PMTB19_BACSU	MODIFICATION METHYLASE MTHZI	METHANOBACTERIUM THERMOFORMICICUM	188-215	256-323							
PMTB20_BACSU	MODIFICATION METHYLASE KPNII	KLEBSIELLA PNEUMONIAE	270-297								
PMTB21_BACSU	MODIFICATION METHYLASE MSPI	STREPTOCOCCUS MUTANS	39-66	224-238	349-376						
PMTB22_BACSU	MODIFICATION METHYLASE MSPI	MORAXELLA SP	5-39	49-104							
PMTB23_BACSU	MODIFICATION METHYLASE NLAIII	NEISSERIA LACTAMICA	124-158	183-210							
PMTB24_BACSU	MODIFICATION METHYLASE PVU II	PROTEUS VULGARIS	308-335								
PMTB25_BACSU	MEMBRANE-ASSOCIATED ATPASE	SULFOLOBUS ACIDOCALDARIUS	9-67								
PMTB26_BACSU	MODIFICATION METHYLASE PSTI	PROVIDENCIA STUARTII	226-264								
PMTB27_BACSU	MODIFICATION METHYLASE STSI	ESCHERICHIA COLI	80-107		600-645						
PMTB28_BACSU	MODIFICATION METHYLASE SSOII	SHIGELLA SONNEI	116-153	434-461							
PMTB29_BACSU	MODIFICATION METHYLASE SAU96I	STAPHYLOCOCCUS AUREUS	81-108								
PMTB30_BACSU	MODIFICATION METHYLASE SCRFI-A	LACTOCOCCUS LACTIS	233-274								
PMTB31_BACSU	MODIFICATION METHYLASE SCRFI-B	LACTOCOCCUS LACTIS	88-115	187-214							
PMTB32_BACSU	CPG DNA METHYLASE	LACTOCOCCUS LACTIS	27-61								
PMTB33_BACSU	MODIFICATION METHYLASE SMAI	SPYROPLASMA SP	188-230	256-290							
PMTB34_BACSU	MODIFICATION METHYLASE TTHB8I	SERRATIA MARCESCENS	61-88								
PMTB35_BACSU	MODIFICATION METHYLASE VSPI	THERMUS AQUATICUS	120-157								
PMTB36_BACSU	MODIFICATION METHYLASE VSPI	VIBRIO SP	23-66								
PMTB37_BACSU	MODIFICATION METHYLASE VSPI	ESCHERICHIA COLI	320-381	1014-1048	1216-1232						
PMTB38_BACSU	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	ERWINIA AMYLOVORA	24-54								
PMTB39_BACSU	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	MORGANELA MORGANII	27-54								
PMTB40_BACSU	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	PROTEUS MIRABILIS	21-63								
PMTB41_BACSU	MAJOR OUTER MEMBRANE LIPOPROTEIN PREC	BACILLUS SUBTILIS	101-132	299-326							
PMTB42_BACSU	UDP-LIGASE	ESCHERICHIA COLI	107-134								
PMTB43_BACSU	UDP-MURNAAC-PENTAPEPTIDE SYNTHETASE	ESCHERICHIA COLI	407-437								
PMTB44_BACSU	ENOYLPRUVATE TRANSFERASE	ESCHERICHIA COLI	392-419								
PMTB45_BACSU	ENOYLPRUVATE TRANSFERASE	ENTEROBACTER CLOACAE	392-419								
PMTB46_BACSU	METHYLMALONYL-COA MUTASE BETA-SUBUNIT	STREPTOMYCES CINNAMOMONENSIS	31-58								

PCGENE	1071784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNIFN_BRAJA	BIOSYNTHESIS PROTEIN NIFN	BRADYRHIZOBIUM JAPONICUM	339-366								
PNIFS_ANASP	NIFS PROTEIN	ANABAENA SP	112-139								
PNIFS_LACDE	NIFS PROTEIN HOMOLOG	LACTOBACILLUS DELBRUECKII	59-86								
PNIFT_AZOVI	NIFT PROTEIN	AZOTODACTER VINELANDII	6-33								
PNIFU_ANASI	NIFU PROTEIN	ANABAENA SP	7-49								
PNIFU_ANASP	NIFU PROTEIN	ANABAENA SP	148-178								
PNIFU_KLEPN	NIFU PROTEIN	KLEBSIELLA PNEUMONIAE	66-93								
PNIKA_ECOLI	NICKEL TRANSPORT PROTEIN NIKK PRECURSOR	ESCHERICHIA COLI	122-149	283-309	436-483						
PNIKE_ECOLI	NICKEL TRANSPORT PROTEIN NIKK	ESCHERICHIA COLI	177-204								
PNIRB_ECOLI	NITRITE REDUCTASE	ESCHERICHIA COLI	54-81	345-372							
PNIRC_ECOLI	NIRC PROTEIN	ESCHERICHIA COLI	212-239								
PNIRS_PSEST	PSEUDOMONAS CYTOCHROME OXIDASE PRECURSOR	PSEUDOMONAS STUTZERI	303-333								
PNISB_LACLA	117 KD MEMBRANE ASSOCIATED PROTEIN	LACTOCOCCUS LACTIS	202-229	287-332	663-697	886-920					
PNISC_LACLA	NISIN BIOSYNTHESIS PROTEIN NISC	LACTOCOCCUS LACTIS	52-92	140-188							
PNIST_LACLA	NISIN TRANSPORT PROTEIN NIST	LACTOCOCCUS LACTIS	223-257	278-305	426-470						
PNIVA_CLOPA	HOMOCITRATE SYNTHASE, ALPHA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	100-127	234-268							
PNIVO_CLOPA	HOMOCITRATE SYNTHASE, OMEGA SUBUNIT	CLOSTRIDIUM PASTEURIANUM	63-94	103-132	213-240	283-310					
PNMPC_ECOLI	PORIN PROTEIN NMPC PRECURSOR	ESCHERICHIA COLI	22-49	69-96	335-362						
PNODC_BRASP	MODULATION PROTEIN C	BRADYRHIZOBIUM SP	3-10								
PNODC_RHILO	MODULATION PROTEIN C	RHIZOBIUM LOTI	286-313								
PNODC_RHILT	MODULATION PROTEIN C	RHIZOBIUM LEGUMINOSARUM	14-48								
PNODF_RHILV	MODULATION PROTEIN F	RHIZOBIUM LEGUMINOSARUM	31-58								
PNODF_RHIMS	MODULATION PROTEIN F	RHIZOBIUM MELILOTI	39-66								
PNODG_RHIME	MODULATION PROTEIN G	RHIZOBIUM MELILOTI	8-35								
PNODL_RHILV	MODULATION PROTEIN L	RHIZOBIUM LEGUMINOSARUM	26-53								
PNODQ_AZOB	MODULATION PROTEIN Q	AZOSPIRILLUM BRASILENSE	60-87								
PNODT_RHILT	MODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	104-134	355-382	420-454						
PNODT_RHILV	MODULATION PROTEIN T	RHIZOBIUM LEGUMINOSARUM	364-391	416-443							
PNODU_RHIFR	MODULATION PROTEIN U	RHIZOBIUM FREDDII	506-536								
PNODY_BRAJA	MODULATION PROTEIN V	BRADYRHIZOBIUM JAPONICUM	378-419	739-766							
PNODX_RHILV	MODULATION PROTEIN X	RHIZOBIUM LEGUMINOSARUM	232-259								
PNOLB_RHIFR	MODULATION PROTEIN NOLB	RHIZOBIUM MELILOTI	133-160								
PNOLR_RHIME	MODULATION PROTEIN NOLR	RHIZOBIUM MELILOTI	88-115								
PNOSD_PSEST	REGULATORY PROTEIN NOSR	PSEUDOMONAS STUTZERI	319-346								
PNOSR_PSEST	REGULATORY PROTEIN NOSR	PSEUDOMONAS STUTZERI	127-154								
PNOSZ_PSEAF	NITROUS OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS AFRIGINOSA	267-294								
PNUSZ_PNIST	NITROUS OXIDE REDUCTASE PRECURSOR	PSEUDOMONAS STUTZERI	557-591								
PNPRE_BACAM	BACILLUS POLYMYXA	BACILLUS AMYLOLIQUEFACIENS	113-147	217-244							
PNPRE_BACPO	BACILLUS POLYMYXA	BACILLUS SUBTILIS	57-91	187-228							
PNPRE_BACSU	BACILLUS POLYMYXA	BACILLUS SUBTILIS	116-146	307-334							
PNQOS_PARDE	NADH:UBIQUINONE OXIDOREDUCTASE 21 KD CHAIN	PARACOCCLUS DENTRIFICANS	4-45								
PNQO9_PARDE	NADH:UBIQUINONE OXIDOREDUCTASE 20 KD CHAIN	PARACOCCLUS DENTRIFICANS	125-152								
PNRDU_ECOLI	ANALR RIBONUCLEOTIDE REDUCTASE	ESCHERICHIA COLI	91-125								
PNRFA_ECOLI	CYTOCHROME C332 PRECURSOR	ESCHERICHIA COLI	319-346								
PNRFG_ECOLI	NRFG PROTEIN	ESCHERICHIA COLI	72-111								
PNRLI_RHORH	ALIPHATIC NITRILASE	RHODOCOCCUS RHODOCHROUS	109-136								
PNRSL_LACLA	NISIN-RESISTANCE PROTEIN	LACTOCOCCUS LACTIS	52-79	135-162							
PNRSC_ECOLI	DNA-BINDING PROTEIN VF1	ANABAENA SP	65-92								
PNRSC_ECOLI	DNA-BINDING PROTEIN VF1	ANABAENA SP	44-91								
PNRSC_ECOLI	GLOBAL NITROGEN REGULATOR	SYNECHOCOCCLUS SP	65-92								
PNRSC_ECOLI	GLOBAL NITROGEN REGULATOR	SYNECHOCYSTIS SP	67-94								
PNRTRB_VIBL	NITROGEN REGULATION PROTEIN NTRB	VIBRIO ALGINOLYTICUS	194-223								
PNTRC_PROVU	NITROGEN REGULATION PROTEIN NR	PROTEUS VULGARIS	385-412								
PNTRC_RHIME	NITROGEN ASSIMILATION REGULATORY PROTEIN	RHIZOBIUM MELILOTI	451-478								
PNUJC_SYNP7	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCLUS SP	80-107								
PNUJC_SYNP7	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCYSTIS SP	27-54								
PNUJC_SYNP2	NADH-PLASTOQUINONE OXIDOREDUCTASE CHAIN	SYNECHOCOCCLUS SP	614-641								

PCGENE	10717/284	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PPBP4_BACSU	PENICILLIN-BINDING PROTEIN 4*	BACILLUS SUBTILIS	374-401								
PPBP4_ECCLI	PENICILLIN-BINDING PROTEIN 4 PRECURSOR	ESCHERICHIA COLI	316-363								
PPBP4_ECCLI	PENICILLIN-BINDING PROTEIN 1A	ESCHERICHIA COLI	145-172								
PPBPB_ECCLI	PENICILLIN-BINDING PROTEIN 1B	ESCHERICHIA COLI	62-96	263-290							
PPBPX_STRPN	PENICILLIN-BINDING PROTEIN 2X	STREPTOCOCCUS PNEUMONIAE	89-116	706-733							
PPBP_5TAU	PENICILLIN-BINDING PROTEIN	STAPHYLOCOCCUS AUREUS	78-108	176-203	261-324	302-529					
PPCAB_PSEPU	CYCLOISOMERASE	PSEUDOMONAS PUTIDA	115-142	226-253							
PEL1_ERWCA	PECTATE LYASE III PRECURSOR	ERWINIA CAROTOVORA	110-137								
PEL1_ERWCA	PECTATE LYASE A PRECURSOR	ERWINIA CAROTOVORA	110-137								
PEL1_ERWCA	PECTATE LYASE B PRECURSOR	ERWINIA CAROTOVORA	110-137								
PEL1_ERWCA	PECTATE LYASE C PRECURSOR	ERWINIA CAROTOVORA	110-137								
PEL1_ERWCH	PECTATE LYASE E PRECURSOR	ERWINIA CHRYSANTHEMI	40-67	209-243							
PEL1_ERWCA	PERIPLASMIC PECTATE LYASE PRECURSOR	ERWINIA CAROTOVORA	455-482								
PEL1_ERWCA	PERIPLASMIC PECTATE LYASE PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	459-489								
PELX_ERWCA	PUTATIVE PECTATE LYASE X PRECURSOR	ERWINIA CAROTOVORA	188-218								
PELX_ERWCH	EXOPOLYGALACTURONATE LYASE PRECURSOR	ERWINIA CHRYSANTHEMI	466-493								
PEPD_ECCLI	AMINOACYL-HISTIDINE DIPEPTIDASE	ESCHERICHIA COLI	264-314								
PEPQ_ECCLI	X-PRO DIPEPTIDASE	ESCHERICHIA COLI	231-278								
PERT_BORBR	PERTACTIN PRECURSOR	BORDETELLA BRONCHISEPTICA	617-644								
PERT_BORPA	PERTACTIN PRECURSOR	BORDETELLA PARAPERTUSSIS	628-655								
PERT_BORPE	PERTACTIN PRECURSOR	BORDETELLA PERTUSSIS	616-643								
PPCK_CORGL	PHOSPHOGLYCERATE KINASE	CORYNEBACTERIUM GLUTINICUM	83-117								
PPCK_ECCLI	PHOSPHOGLYCERATE KINASE	ESCHERICHIA COLI	186-216								
PPCK_METBR	PHOSPHOGLYCERATE KINASE	METHANOBACTERIUM BRYANTII	36-63								
PPCK_THETH	PHOSPHOGLYCERATE KINASE	THERMUS AQUATICUS	222-249								
PPGL1_ERWCA	ENDO-POLYGALACTURONASE PRECURSOR	ERWINIA CAROTOVORA	217-271								
PPGTE_SALTY	OUTER MEMBRANE PROTEASE E PRECURSOR	SALMONELLA TYPHIMURUM	66-93								
PPH1_FREDI	C-PHYCOCYANIN-1 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPH2_FREDI	C-PHYCOCYANIN-2 ALPHA CHAIN	FREMYELLA DIPLOSIPHON	21-48								
PPH3_FREDI	POLY(G-HYDROXYALKANOATE) POLYMERASE I	PSEUDOMONAS OLEOVORANS	264-291								
PPH4_ANACY	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA CYLINDRICA	7-48								
PPH4_ANAVA	ALLOPHYCOCYANIN BETA CHAIN	ANABAENA VARIABILIS	14-48								
PPH4_MASLA	ALLOPHYCOCYANIN BETA CHAIN	FREMYELLA DIPLOSIPHON	8-49								
PPH4_MASLA	ALLOPHYCOCYANIN BETA CHAIN	MASTIGOCALDUS LAMINOSUS	14-41								
PPH4_SYN6	ALLOPHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	14-41								
PPH4_SYN6	ALLOPHYCOCYANIN ALPHA-B CHAIN	SYNECHOCOCCUS SP	33-60								
PPH4_FREDI	ALLOPHYCOCYANIN GAMMA CHAIN	FREMYELLA DIPLOSIPHON	32-59								
PPH4_FREDI	C-PHYCOCYANIN-3 BETA CHAIN	FREMYELLA DIPLOSIPHON	29-56								
PPH4_ALCEU	ACETOACETYL-COA REDUCTASE	ALCALIGENES EUTROPHUS	55-85								
PPH4_SYN1	C-PHYCOCYANIN ALPHA CHAIN	SYNECHOCYSTIS SP	21-55								
PPH4_SYN6	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPH4_SYN7	C-PHYCOCYANIN BETA CHAIN	SYNECHOCOCCUS SP	28-55								
PPH4_SYN1	C-PHYCOCYANIN BETA CHAIN	SYNECHOCYSTIS SP	21-55								
PPH4_ECCLI	CHROMATE MUTASE	ESCHERICHIA COLI	10-37								
PPH4_ERWHE	CHROMATE MUTASE	ERWINIA HERBICOLA	10-37	159-186	252-286						
PPH4_PESP	PHENOL 2-MONOOXYGENASE	PSEUDOMONAS SP	171-201	282-314	437-464						
PPH4_PESP	PHYCOERYTHROCYANIN BETA CHAIN	MASTIGOCALDUS LAMINOSUS	21-62								
PPH4_PESP	CATECHOL 1,2-DIOXYGENASE	PSEUDOMONAS SP	24-51								
PPH4_SYN1	LINKER POLYPEPTIDE	SYNECHOCOCCUS SP	158-185								
PPH4_ECCLI	PHENYLALANINE-SPECIFIC PERMEASE	ESCHERICHIA COLI	284-311								
PPH4_CLOP	PERIPLASMIC [FE] HYDROGENASE 1	CLOSTRIDIUM PASTEURIANUM	434-471								
PPH1_BAQUE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPH1_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPH1_BACCE	SPHINGOMYELINASE C PRECURSOR	BACILLUS CEREUS	2-36								
PPH1_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	32-59	179-206							
PPH1_CLOBI	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM BIFERMENTANS	50-77	335-365							
PPH1_CLOPE	PHOSPHOLIPASE C PRECURSOR	CLOSTRIDIUM PERFRINGENS	210-237	369-398							

PCGENE	1071784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PPHLC_LISMO	PHOSPHOLIPASE C PRECURSOR	LISTERIA MONOCYTOGENES	147-174								
PPHLC_PSEAE	HEMOLYTIC PHOSPHOLIPASE C PRECURSOR	PSEUDOMONAS AERUGINOSA	685-712								
PPHLC_STAUI	PHOSPHOLIPASE C PRECURSOR	STAPHYLOCOCCUS AUREUS	6-33								
PPHLD_BACCE	PHOSPHOLIPASE C PRECURSOR	BACILLUS CEREUS	179-206								
PPHLL_LPIN	SPHINGOMYELINASE C PRECURSOR	LEPTOSPIRA INTERROGANS	30-57	394-428							
PPHND_ECOLI	PHND PROTEIN	ESCHERICHIA COLI	296-326								
PPHND_ECOLI	PHND PROTEIN	ESCHERICHIA COLI	178-205								
PPHNM_ECOLI	PHNM PROTEIN	ESCHERICHIA COLI	5-35								
PPHOE_CITFR	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	CITROBACTER FREUNDII	13-40	47-105							
PPHOE_ECOLI	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	ESCHERICHIA COLI	13-40	64-105	168-195	226-233					
PPHOE_KLEOX	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA OXYTOCA	13-40	64-91							
PPHOE_KLEPN	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	KLEBSIELLA PNEUMONIAE	13-40	64-105							
PPHOE_SALTY	OUTER MEMBRANE PORE PROTEIN E PRECURSOR	SALMONELLA TYPHIMURUM	61-104	320-347							
PPHOP_BACSU	ALK PHOS SYNTHESIS TRANS REG PROTEIN	BACILLUS SUBTILIS	185-219								
PPHOQ_ECOLI	SENSOR PROTEIN PHOQ	ESCHERICHIA COLI	244-278								
PPHOQ_SALTY	VIRULENCE SENSOR PROTEIN PHOQ	SALMONELLA TYPHIMURUM	226-260								
PPHOR_BACSU	ALK PHOS SYNTHESIS SENSOR PROTEIN PHOR	BACILLUS SUBTILIS	89-145	387-425							
PPHRA_ECOLI	PHOTOREPAIR PROTEIN PHRA	ESCHERICHIA COLI	61-90	207-241							
PPHRA_SYNPZ	R-PHYCOCYANIN II ALPHA CHAIN	SYNECHOCOCCUS SP	20-47								
PPHSG_ECOLI	GLYCOCEN PHOSPHORYLASE	SYNECHOCOCCUS SP	20-47								
PPHSM_ECOLI	MALTODEXTRIN PHOSPHORYLASE	ESCHERICHIA COLI	157-184	488-515							
PPILA_NEIGO	PROB SIGNAL RECOGNITION PARTICLE PROTEIN	NEISSERIA GONORRHOEA	71-108								
PPILB_PSEAE	FINBRIAL ASSEMBLY PROTEIN PILB	PSEUDOMONAS AERUGINOSA	16-60								
PPILC_PSEAE	PILC PROTEIN	PSEUDOMONAS AERUGINOSA	143-170								
PPILD_NEIGO	LEADER PEPTIDASE	NEISSERIA GONORRHOEA	110-137								
PPILO_PSEAE	FINBRIAL ASSEMBLY PROTEIN PILQ PRECURSOR	PSEUDOMONAS AERUGINOSA	71-115	619-666							
PPILS_PSEAE	SENSOR PROTEIN PILS	PSEUDOMONAS AERUGINOSA	9-46								
PPIR_ECOLI	PI PROTEIN	ESCHERICHIA COLI	156-188								
PPIV_MORBO	PILN GENE INVERTING PROTEIN	MORAXELLA BOVIS	42-69	152-182							
PPIV_MORLA	PILN GENE INVERTING PROTEIN	MORAXELLA LACUNATA	152-182								
PPPLC_BACCE	PHOSPHODIESTERASE PRECURSOR	BACILLUS CEREUS	217-245								
PPPLC_BAGTU	PHOSPHODIESTERASE PRECURSOR	BACILLUS THURINGIENSIS	216-245								
PPPLC_LISMO	PHOSPHODIESTERASE PRECURSOR	LISTERIA MONOCYTOGENES	238-265								
PPPLSC_ECOLI	ACYLTRANSFERASE	ESCHERICHIA COLI	106-133								
PPLSX_ECOLI	PLSX PROTEIN	ESCHERICHIA COLI	241-270								
PPLYD_ERWCA	PECTIN LYASE	ERWINIA CAROTOVORA	27-92								
PPMBA_ECOLI	PMBA PROTEIN	ESCHERICHIA COLI	9-50								
PPME_ERWCH	PECTINESTERASE PRECURSOR	ERWINIA CHRYSANTHEMI	60-87								
PPMGY_ECOLI	PHOSPHOGLYCERATE MUTASE	ESCHERICHIA COLI	82-116								
PPMGY_ZYMM	PHOSPHOGLYCERATE MUTASE	ZYMONOMAS MOBILIS	13-40	80-110							
PPNP_ECOLI	POLYRIBONUC NUCLEOTIDYL TRANSF	ESCHERICHIA COLI	260-294								
PPNIIH_SALTY	PNIIH PROTEIN	SALMONELLA TYPHIMURUM	178-205								
PPPOK_BACSY	PYRUVATE OXIDOPHOSPHATE DIKINASE	BACTEROIDES SYMBIOSUS	51-78								
PPPORF_PSESY	OUTER MEMBRANE PORIN F PRECURSOR	PSEUDOMONAS SYRINGAE	111-138								
PPPORO_PSEAE	PORIN O PRECURSOR	PSEUDOMONAS AERUGINOSA	390-424								
PPPORP_PSEAE	PORIN P PRECURSOR	PSEUDOMONAS AERUGINOSA	139-181	260-287	369-396						
PPPTD_ECOLI	BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	320-347								
PPPOTE_ECOLI	POTRESCINE-ORNITHINE ANTIPOPTER	ESCHERICHIA COLI	91-118								
PPPOXB_ECOLI	PYRUVATE DEHYDROGENASE	ESCHERICHIA COLI	8-38								
PPPB3_BACSU	ALKALINE PHOSPHATASE III PRECURSOR	BACILLUS SUBTILIS	109-150	433-460							
PPPB4_BACSU	ALKALINE PHOSPHATASE IV PRECURSOR	BACILLUS SUBTILIS	85-123	336-363							
PPPB_ECOLI	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA COLI	235-262								
PPPB_ESCRE	ALKALINE PHOSPHATASE PRECURSOR	ESCHERICHIA FERUGSONII	236-263								
PPPC_E_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199								
PPPCF_FLAME	PROLYL ENDOPEPTIDASE PRECURSOR	FLAVOBACTERIUM MENINGOSEPTICUM	158-199	236-283							
PPPCK_ECOLI	PHOSPHOENOLPYRUVATE CARBOXYKINASE	ESCHERICHIA COLI	45-72								

PGENE	1071784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
ELENAM	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PPDA_CLOPE	PROTEIN A PRECURSOR	CLOSTRIDIUM PERRINGENS	73-107								
PPPSA_ECOLI	PHOSPHONOLPYRUVATE SYNTHASE	ESCHERICHIA COLI	49-76								
PPQO2_ACICA	COENZYME PQQ SYNTHESIS PROTEIN II	ACINETOBACTER CALCOACETICUS	40-74								
PPPCA_ANAVA	CALCIUM DEPENDENT PROTEINASE PRECURSOR	ANABAENA VARIABILIS	371-398								
PPPCA_THEAC	PROTEASOME, ALPHA SUBUNIT	THERMOPLASMA ACIDOPHILUM	88-115								
PPRC_ECOLI	TAIL-SPECIFIC PROTEINASE PRECURSOR	ESCHERICHIA COLI	158-192	366-393							
PPREI_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	27-78	152-179	264-347						
PPRE2_STAAU	PLASMID RECOMBINATION ENZYME	STAPHYLOCOCCUS AUREUS	48-75	181-208	310-361	366-393					
PPREA_LACPL	PLASMID RECOMBINATION ENZYME	LACTOBACILLUS PLANTARUM	37-71	291-318							
PPRE_BACLI	REGULATORY PROTEIN	BACILLUS LICHENIFORMIS	2-40								
PPRE_BACSP	PLASMID RECOMBINATION ENZYME	BACILLUS SP	181-224	288-345							
PPRE_STRAG	PLASMID RECOMBINATION ENZYME	STREPTOCOCCUS AGALACTIAE	285-319	332-359	420-454						
PPREA_LISMO	LISTERIOLYSIN REGULATORY PROTEIN	LISTERIA MONOCYTOGENES	76-110	173-204							
PPRIA_ECOLI	PRIMOSOMAL PROTEIN N	ESCHERICHIA COLI	218-245								
PPRIM_BACSU	DNA PRIMASE	BACILLUS SUBTILIS	383-433								
PPRIM_BUCAP	DNA PRIMASE	BUCHNERA APHIDICOLA	13-43	282-319							
PPRIM_CLOAB	DNA PRIMASE	CLOSTRIDIUM ACETOBUTYLICUM	87-114								
PPRIM_LACLA	DNA PRIMASE	LACTOCOCCUS LACTIS	269-296								
PPRIM_RICPR	DNA PRIMASE	RICKETTSIA PROWAZEKII	10-37	245-286	477-504	526-593					
PPRIS_DESDE	PRISMAINE PROTEIN	DESULFOVIBRIO DESULFURICANS	30-37								
PPRLB_ACHLY	BETA-LYTIC METALLOENDOPEPTIDASE	ACHROMOBACTER LYTIUS	317-344								
PPRLB_LYSEN	BETA-LYTIC METALLOENDOPEPTIDASE	LYSOBACTER ENZYMOGENES	121-148								
PPROT_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145	275-316							
PPR02_LISMO	ZINC METALLOPROTEINASE PRECURSOR	LISTERIA MONOCYTOGENES	111-145								
PPROA_SERMA	GAMMA-GLUTAMYL PHOSPHATE REDUCTASE	SERRATIA MARCESCENS	309-336								
PPROA_STAAU	PROTEIN A PRECURSOR	STAPHYLOCOCCUS AUREUS	2-29								
PPROB_SERMA	GLUTAMATE 5-KINASE	SERRATIA MARCESCENS	7-34								
PPROB_STRAG	PROTEIN B	STREPTOCOCCUS AGALACTIAE	58-85								
PPROC_PSEAE	PYRROLINE-5-CARBOXYLATE REDUCTASE	PSEUDOMONAS AERUGINOSA	148-175								
PPROH_BACSU	PYRROLINE-5-CARBOXYLATE REDUCTASE HOMOL	BACILLUS SUBTILIS	200-227								
PPROP_ECOLI	PROLINEBETAINE TRANSPORTER	ESCHERICHIA COLI	460-487								
PPROV_ECOLI	PERIPHERAL MEMBRANE PROTEIN PROV	ESCHERICHIA COLI	24-54								
PPROV_SALTY	PERIPHERAL MEMBRANE PROTEIN PROV	SALMONELLA TYPHIMURUM	170-197								
PPRRC_ECOLI	PRB PROTEIN	ESCHERICHIA COLI	282-309								
PPRRC_ECOLI	ANTICODON NUCLEASE	ESCHERICHIA COLI	278-305								
PPRRC_ECOLI	PRD PROTEIN	ESCHERICHIA COLI	52-87	95-137							
PPPSA_BACSU	PROTEIN EXPORT PROTEIN PSA PRECURSOR	BACILLUS SUBTILIS	56-110								
PPRTA_STRGR	PROTEIN A PRECURSOR	STREPTOMYCES GRISEUS	103-130								
PPRTC_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	285-312								
PPRTC_PORGI	COLLAGENASE PRECURSOR	PORPHYROMONAS GINGIVALIS	328-355								
PPRTE_BACNO	EXTRACELLULAR SERINE PROTEASE PRECURSOR	BACTEROIDES NODOSUS	106-131	219-265	346-384						
PPRTE_ERWCH	PROTEASE SECRETION PROTEIN PRTE	ERWINIA CHRYSANTHEMI	108-135	158-192	231-290						
PPRTE_ERWCH	PROTEASE SECRETION PROTEIN PRTE	ERWINIA CHRYSANTHEMI	280-310								
PPRTM_LACLA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	76-103	112-139							
PPRTM_LACLC	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	26-53	76-103	112-139						
PPRTM_LACPA	PROTEASE MATURATION PROTEIN PRECURSOR	LACTOBACILLUS PARACASEI	76-103	112-139							
PPRTS_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	376-407	1007-1041						
PPRTT_SERMA	EXTRACELLULAR SERINE PROTEASE PRECURSOR	SERRATIA MARCESCENS	304-331	464-491	1007-1041						
PPRTX_ERWCH	SECRETED PROTEASE C PRECURSOR	ERWINIA CHRYSANTHEMI	314-341								
PPSAA_STYEN	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS ELONGATUS NAEGEL	120-147								
PPSAA_STY2	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS SP	109-136	326-356							
PPSAA_STYU	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS VULCANUS	120-147								
PPSAA_STY3	CHLOROPHYLL A APOPROTEIN A1	SYNECHOCOCCUS VULCANUS	44-71	120-147	338-368						
PPSAD_YIERE	CHAPERONE PROTEIN PSAD PRECURSOR	YERSINIA PESTIS	244-271								
PPSAD_SYNP6	PHOTOSYSTEM I REACTION CENTRE SUBUNIT II	SYNECHOCOCCUS SP	11-38								
PPSAE_YERPE	PSAE PROTEIN PRECURSOR	YERSINIA PESTIS	66-118								

PCGENE	107117814	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PPSBO ANANI	STABILIZING POLYPEPTIDE PRECURSOR	ANACYSTIS NIDULANS	99-126	209-243							
PPSPA ECOLI	PHAGE SHOCK PROTEIN A	ESCHERICHIA COLI	55-82								
PPSRA WOLSU	POLYSULFIDE REDUCTASE CHAIN A PRECURSOR	WOLINELLA SUCCINOGENES	114-141								
PPSTS ECOLI	PHOSPHATE-BINDING PROTEIN PRECURSOR	ESCHERICHIA COLI	40-74								
PPT1 BACSU	PHOSPHOTRANSFERASE	BACILLUS SUBTILIS	26-60								
PPT1 ECOLI	PHOSPHOTRANSFERASE	ESCHERICHIA COLI	135-162	399-426							
PPT1_SALTU	PHOSPHOTRANSFERASE	SALMONELLA TYPHIMURIUM	232-259	399-426							
PPT1 STACA	PHOSPHOTRANSFERASE	STAPHYLOCOCCUS CARNOSUS	34-61								
PPT1_STRSL	PHOSPHOTRANSFERASE	STREPTOCOCCUS SALIVARIUS	14-61	198-232							
PPT2B ERWCH	PHOSPHOTRANSFERASE ENZYME II	ERWINIA CHRYSAEANTHII	127-154								
PPT2G BACSU	PHOSPHOTRANSFERASE ENZYME II	BACILLUS SUBTILIS	670-697								
PPT2L_LACCA	PHOSPHOTRANSFERASE ENZYME II	LACTOBACILLUS CASEI	537-564								
PPT2L_LACLA	PHOSPHOTRANSFERASE ENZYME II	LACTOCOCCUS LACTIS	183-214	409-436							
PPT2L_STAAL	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS AUREUS	421-448	530-557							
PPT2M ECOLI	PHOSPHOTRANSFERASE ENZYME II	ESCHERICHIA COLI	445-489								
PPT2M STACA	PHOSPHOTRANSFERASE ENZYME II	STAPHYLOCOCCUS CARNOSUS	388-415								
PPT2N ECOLI	N-ACETYL-GLUCOSAMINE-PERMEASE	ESCHERICHIA COLI	370-400								
PPT2S_STRHU	PHOSPHOTRANSFERASE ENZYME II	STREPTOCOCCUS MUTANS	600-627								
PPT2F_SALTU	PHOSPHOTRANSFERASE FPR PROTEIN	SALMONELLA TYPHIMURIUM	107-134								
PPT2L_LACCA	PHOSPHOTRANSFERASE FACTOR III	LACTOBACILLUS CASEI	40-67								
PPT2P ECOLI	PHOSPHOCARRIER PROTEIN HPR	ESCHERICHIA COLI & SALMONELLA TYPHIMURIUM	31-65								
PPT2P KLEPN	PHOSPHOCARRIER PROTEIN HPR	KLEBSIELLA PNEUMONIAE	31-65								
PPT2B ECOLI	PROTEASE II	ESCHERICHIA COLI	94-121	217-251							
PPT2A KLEAE	PULLULANASE	KLEBSIELLA AEROGONES	894-928								
PPT2A KLEPN	PULLULANASE	KLEBSIELLA PNEUMONIAE	894-918								
PPT2L KLEPN	LEADER PEPTIDASE	KLEBSIELLA PNEUMONIAE	178-205								
PPT2S KLEPN	PULS PRECURSOR	KLEBSIELLA PNEUMONIAE	70-97								
PPT2A_PSEPU	UPTAKE PROTEIN PRECURSOR	PSEUDOMONAS PUTIDA	112-162	210-237	429-463	716-763					
PPT2I_BACSU	AMIDOPHOSPHORIBOSYL TRANSF. PREC	BACILLUS SUBTILIS	394-421								
PPT2J_BACSU	PHOSPHORIBOSYL-AMINE-GLYCINE LIGASE	BACILLUS SUBTILIS	349-376								
PPT2K_BACSU	FORMYL TRANSFERASE	BACILLUS SUBTILIS	149-176								
PPT2L ECOLI	FORMYL TRANSFERASE	ESCHERICHIA COLI	27-54								
PPT2A_BACSU	SYNTHASE I	BACILLUS SUBTILIS	18-45								
PPT2S_BACSU	CYCLO-LIGASE	BACILLUS SUBTILIS	131-158								
PPT2B ECOLI	AIR CARBOXYLASE	ESCHERICHIA COLI	3-43								
PPT2J_BACSU	SAICAR SYNTHETASE	BACILLUS SUBTILIS	226-253								
PPT2B_BACSU	ADENYLOSUCINATE LYASE	BACILLUS SUBTILIS	56-130								
PPT2B ECOLI	ADENYLOSUCINATE LYASE	ESCHERICHIA COLI	194-221	331-372							
PPT2B_BACSU	AICAR TRANSFORMYLASE	BACILLUS SUBTILIS	19-53	345-372							
PPT2B ECOLI	AICAR TRANSFORMYLASE	ESCHERICHIA COLI	239-268								
PPT2S_SALTU	AICAR TRANSFORMYLASE	SALMONELLA TYPHIMURIUM	218-247								
PPT2L_BACSU	SYNTHASE II	BACILLUS SUBTILIS	609-636								
PPT2I_ANASP	LINKER POLYPEPTIDE CPCG1	ANABAENA SP	88-115								
PPT2I_MASLA	LINKER POLYPEPTIDE CPCG1	MASTIGOCALDUS LAMINOSUS	89-116								
PPT2G_ANASP	LINKER POLYPEPTIDE CPCG2	ANABAENA SP	88-115								
PPT2G_MASLA	LINKER POLYPEPTIDE CPCG2	MASTIGOCALDUS LAMINOSUS	89-116								
PPT2G_MASLA	LINKER POLYPEPTIDE CPCG3	MASTIGOCALDUS LAMINOSUS	91-132								
PPT2G_ANASP	LINKER POLYPEPTIDE CPCG4	ANABAENA SP	90-131								
PPT2I_ANASP	32.1 KD LINKER POLYPEPTIDE	ANABAENA SP	35-62								
PPT2J_FREDI	27.9 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	105-132								
PPT2A_FREDI	31.6 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	22-66								
PPT2S_FREDI	37.5 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	106-143								
PPT2B_FREDI	30.8 KD LINKER POLYPEPTIDE	FREMYELLA DIPLOSIPHON	43-70	113-140							
PPT2B_BACSU	ASPARTATE CARBAMOYLTRANSFERASE	BACILLUS SUBTILIS	9-36								
PPT2B_SERMA	ASPARTATE CARBAMOYLTRANSFERASE	SERRAIA MARCESCENS	70-97								
PPT2D_ECOLI	DIHYDROOROTATE DEHYDROGENASE	ESCHERICHIA COLI	115-142								

PCGENE	107x178x4	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILENAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PPYRD_SALTY	DIHYDROOXYLATE DEHYDROGENASE	SALMONELLA TYPHIMURUM	115-142	183-210							
PPYRG_BACSU	CTP SYNTHASE	BACILLUS SUBTILIS	275-302	322-349							
PPYSI_FREDI	PHYCOBILISOME 9.7 KD LINKER POLYPEPTIDE	FRENYELLA DIPLOSPHON	21-48								
POOR_ECOLI	QUINONE OXIDOREDUCTASE	ESCHERICHIA COLI	180-215								
POUEA_ECOLI	QUEUOSINE BIOSYNTHESIS PROTEIN QUEA	ESCHERICHIA COLI	234-261								
PR4K_CLOPA	34.2 KD PROTEIN IN RUBREDOXIN OPERON	CLOSTRIDIUM PASTEURIANUM	23-30	157-232							
PRACC_ECOLI	RACC PROTEIN	ESCHERICHIA COLI	5-32								
PRACD_STRTR	ASPARTATE RACEMASE	STREPTOCOCCUS THERMOPHILUS	152-189								
PRACX_BACSU	PROBABLE AMINO ACID RACEMASE	BACILLUS SUBTILIS	132-162								
PRAFI_ECOLI	ALPHA-GALACTOSIDASE	ESCHERICHIA COLI	89-116								
PRAFD_ECOLI	RAFFINOSE INVERTASE	ESCHERICHIA COLI	348-375								
PRBSC_ECOLI	RIBOSE TRANSPORT SYSTEM COMPONENT	ESCHERICHIA COLI	65-99	195-222							
PRBSK_ECOLI	RIBOKINASE	ESCHERICHIA COLI	200-239								
PRBTR_KLEAE	RIBITOL (RBT) OPERON REPRESSOR	KLEBSIELLA AEROGES	6-47								
PRCSA_ECOLI	BIOSYNTHESIS ACTIVATION PROTEIN A	ESCHERICHIA COLI	170-197								
PRCSA_ERWAM	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA AMYLOVORA	92-119	174-201							
PRCSA_ERWST	BIOSYNTHESIS ACTIVATION PROTEIN A	ERWINIA STEWARTII	174-201								
PRCSA_KLEAE	BIOSYNTHESIS ACTIVATION PROTEIN A	KLEBSIELLA AEROGES	168-205								
PRCSB_ECOLI	CAPSULE SYNTHESIS B COMPONENT	ESCHERICHIA COLI	14-41	159-186							
PRECJ_LEGPN	RECA PROTEIN	LEGIONELLA PNEUMOPHILA	262-310								
PRECJ_ACHLA	RECA PROTEIN	ACHOLEPLASMA LAIDLAVII	283-310								
PRECJ_AGRTU	RECA PROTEIN	AGROBACTERIUM TUNEFACIENS	3-30	132-159	281-308						
PRECJ_ANAVA	RECA PROTEIN	ANABAENA VARIABILIS	322-349								
PRECJ_AQUPY	RECA PROTEIN	AQUIFEX PYROPHILUS	63-90	126-153							
PRECJ_BACFR	RECE PROTEIN	BACTEROIDES FRAGILIS	108-135								
PRECJ_BACSU	RECE PROTEIN	BACILLUS SUBTILIS	267-294								
PRECJ_BRIAB	RECA PROTEIN	BRUCELLA ABORTUS	3-30	132-159	280-307						
PRECJ_BURCE	RECA PROTEIN	BURKHOLDERIA CEPACIA	75-109								
PRECJ_ERWCA	RECA PROTEIN	ERWINIA CAROTOVORA	284-311								
PRECJ_LACDE	RECA PROTEIN	LACTOBACILLUS DELBRUECKII	20-47								
PRECJ_LACHE	RECA PROTEIN	LACTOBACILLUS HELVETICUS	20-47								
PRECJ_LAGLA	RECA PROTEIN	LACTOCOCCUS LACTIS	135-162	232-269	288-315						
PRECJ_METCL	RECA PROTEIN	METHYLOMONAS CLARA	266-303								
PRECJ_METFL	RECA PROTEIN	METHYLOMONAS CLARA	276-303								
PRECJ_MYCPH	RECA PROTEIN	MYCOPLASMA PULMONIS	30-57								
PRECJ_MYCTU	RECA PROTEIN	MYCOBACTERIUM TUBERCULOSIS	749-776								
PRECJ_NEIGO	RECA PROTEIN	NEISSERIA GONORRHOEA	263-310								
PRECJ_PROMI	RECA PROTEIN	PROTEUS MIRABILIS	283-310								
PRECJ_PSEAE	RECA PROTEIN	PSEUDOMONAS AERUGINOSA	282-309								
PRECJ_RHILV	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	3-30	131-158	280-307						
PRECJ_RHILV	RECA PROTEIN	RHIZOBIUM LEGUMINOSARUM	119-146	268-295							
PRECJ_RHIME	RECA PROTEIN	RHIZOBIUM MELLLOTTI	119-146	268-295							
PRECJ_RHOSH	RECA PROTEIN	RHODOBACTER SPHAEROIDES	119-146								
PRECJ_STRPN	RECA PROTEIN	STREPTOCOCCUS PNEUMONIAE	134-161	293-327							
PRECJ_SYNP2	RECA PROTEIN	SYNECHOCOCCUS SP	124-151								
PRECJ_VIBCH	RECA PROTEIN	VIBRIO CHOLERAE	290-317								
PRECJ_BACSU	RECF PROTEIN	BACILLUS SUBTILIS	4-31	178-205							
PRECJ_ECOLI	RECF PROTEIN	ESCHERICHIA COLI	82-109	147-174							
PRECJ_PRQMI	RECF PROTEIN	PROTEUS MIRABILIS	86-113								
PRECJ_PSEU	RECF PROTEIN	PSEUDOMONAS PUTIDA	84-111								
PRECJ_SALTU	RECF PROTEIN	SALMONELLA TYPHIMURUM	147-174								
PRECJ_ECOLI	EXONUCLEASE RECI	ESCHERICHIA COLI	52-79								
PRECJ_BACSU	RECOMBINATION PROTEIN	BACILLUS SUBTILIS	21-48	156-184	192-247	299-336	344-378				
PRECJ_ECOLI	DNA HELICASE RECO	ESCHERICHIA COLI	468-495								
PRELA_ECOLI	GTP PYROPHOSPHOKINASE	ESCHERICHIA COLI	680-707								
PREMA_BACSU	REPLICATION AND MAINTENANCE PROTEIN	BACILLUS SUBTILIS	2-36	81-108							
PREMA_STAAU	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS AUREUS	2-36	81-108							

PCGENE	1071181.4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	2-36	81-108							
PREMA_STAEP	REPLICATION AND MAINTENANCE PROTEIN	STAPHYLOCOCCUS EPIDERMIDIS	2-36	81-108							
PREPS_ECOLI	REPLICATION PROTEIN REPA	ESCHERICHIA COLI	50-77	90-117							
PREPA_BACSU	REPA PROTEIN	BACILLUS SUBTILIS	342-373								
PREPA_ECOLI	REPA PROTEIN	ESCHERICHIA COLI	91-118	228-255							
PREPA_NEIGO	REPLICATION PROTEIN	NEISSERIA GONORRHOEA	57-84	138-172							
PREPB_LACPL	REPLICATION PROTEIN REPB	LACTOBACILLUS PLANTARUM	184-211								
PREPM_STAAL	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	234-284								
PREPN_STAAL	REPLICATION INITIATION PROTEIN	STAPHYLOCOCCUS AUREUS	238-285								
PREPR_STRAG	REPR PROTEIN	STREPTOCOCCUS AGALACTIAE	430-467								
PREPS_STRPY	REPS PROTEIN	STREPTOCOCCUS PYOGENES	423-467								
PREPX_STAAL	REP PROTEIN	STAPHYLOCOCCUS AUREUS	111-150	172-210							
PREPY_ECOLI	REPLICATION INITIATION PROTEIN	ESCHERICHIA COLI	288-315								
PREP_CLOPE	REPLICATION PROTEIN	CLOSTRIDIUM PERFRINGENS	168-195	297-324	343-375						
PREP_ECOLI	REP HELICASE	ESCHERICHIA COLI	119-146	205-243							
PREP_LACPL	REP PROTEIN	LACTOBACILLUS PLANTARUM	119-199	260-287							
PRESP_CLOPE	RESOLVASE	CLOSTRIDIUM PERFRINGENS	68-102	151-185							
PRE2_BACSU	PROBABLE PEPTIDE CHAIN RELEASE FACTOR 2	BACILLUS SUBTILIS	34-68								
PRE2_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 2	ESCHERICHIA COLI	86-113	163-204							
PRE2_SALTY	PEPTIDE CHAIN RELEASE FACTOR 2	SALMONELLA TYPHIMURIUM	86-113	163-204							
PRE3_ECOLI	PEPTIDE CHAIN RELEASE FACTOR 3	ESCHERICHIA COLI	180-210	443-473							
PREAB_ECOLI	1,6-GALACTOSYLTRANSFERASE	ESCHERICHIA COLI	199-226								
PRFAG_ECOLI	BIOSYNTHESIS PROTEIN RFAG	ESCHERICHIA COLI	185-212								
PRFAJ_ECOLI	1,2-GLUCOSYLTRANSFERASE	ESCHERICHIA COLI	39-66	233-268							
PRFAJ_SALTY	1,2-GLUCOSYLTRANSFERASE	SALMONELLA TYPHIMURIUM	68-95	145-172	236-263						
PRFAK_SALTY	1,2-N-ACETYLGLUCOSAMINOTRANSFERASE	SALMONELLA TYPHIMURIUM	335-369								
PRFAL_ECOLI	O-ANTIGEN LIGASE	ESCHERICHIA COLI	366-393								
PRFAL_SALTY	O-ANTIGEN LIGASE	SALMONELLA TYPHIMURIUM	326-360								
PRFAP_ECOLI	BIOSYNTHESIS PROTEIN RFAP	ESCHERICHIA COLI	8-35								
PRFAS_ECOLI	BIOSYNTHESIS PROTEIN RFAS	ESCHERICHIA COLI	62-89	184-240							
PRFAY_ECOLI	BIOSYNTHESIS PROTEIN RFAY	ESCHERICHIA COLI	18-45								
PRFAZ_ECOLI	BIOSYNTHESIS PROTEIN RFAZ	ESCHERICHIA COLI	3-30	85-112							
PRFBB_SALTY	DTDP-GLUCOSE 4,6-DEHYDRATASE	SALMONELLA TYPHIMURIUM	320-359								
PRFBM_SALTY	MANNOSE-1-PHOSPHATE GUANYLYLTRANSFERASE	SALMONELLA TYPHIMURIUM	313-361								
PRFBS_SALTY	PARATOSE SYNTHASE	SALMONELLA TYPHI	22-56	205-232							
PRFEA_VIBAN	PRECURSOR FOR FERRIC ANGUINACTIN	VIBRIO ANGUILLARUM	349-376								
PRFHE_ECOLI	PEPTIDE CHAIN RELEASE FACTOR HOMOLOG	ESCHERICHIA COLI	83-110								
PRG12_BACTO	PUTATIVE G12 SITE-SPECIFIC RECOMBINASE	BACILLUS THURINGIENSIS	15-68	190-262	310-383						
PRHAB_ECOLI	RHAMNULOXINASE	ESCHERICHIA COLI	175-202								
PRHAB_SALTY	RHAMNULOXINASE	SALMONELLA TYPHIMURIUM	175-202								
PRHAR_ECOLI	L-RHAMNOSE OPERON TRANSACTIVATOR	ESCHERICHIA COLI	10-41								
PRHAS_ECOLI	L-RHAMNOSE OPERON REG PROTEIN RHAS	ESCHERICHIA COLI	152-179								
PRHIR_RHILV	RHIR REGULATORY PROTEIN	RHIZOBIUM LEGUMINOSARUM	206-233								
PRHQB_ECOLI	RNA HELICASE RHLB/MRA	ESCHERICHIA COLI	138-165								
PRHQ_BORBU	TRANS TERM FACTOR RHO	BORRELIA BURGDORFERI	215-242	377-369							
PRHPR_BACSU	PROTEASE PROD REG PROTEIN HPR	BACILLUS SUBTILIS	82-109								
PRHSA_ECOLI	RHSA PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSB_ECOLI	RHSB PROTEIN PRECURSOR	ESCHERICHIA COLI	667-694								
PRHSC_ECOLI	RHSC PROTEIN PRECURSOR	ESCHERICHIA COLI	380-414								
PRHSD_ECOLI	RHSD PROTEIN PRECURSOR	ESCHERICHIA COLI	671-712	1071-1098							
PRHSE_ECOLI	RHSE PROTEIN	ESCHERICHIA COLI	345-372								
PRHSE_ECOLI	RHSE PROTEIN	ESCHERICHIA COLI	93-127								
PRHSE_ECOLI	ACETYLTRANSFERASE	ESCHERICHIA COLI	167-194								
PRH2_ECOLI	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	ESCHERICHIA COLI	167-194								
PRISA_PHOLE	RIBOFLAVIN SYNTHASE ALPHA CHAIN	PHOTOBACTERIUM LEIOGNATHII	2-47	131-158							
PRISB_BACSU	RIBOFLAVIN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	8-35								
PRISB_PHOLE	RIBOFLAVIN SYNTHASE BETA CHAIN	PHOTOBACTERIUM LEIOGNATHII	14-41								
PRLI0_STRAT	SOS RIBOSOMAL PROTEIN LI0	STREPTOMYCES ANTIHIBITICUS	14-72	106-133							
PRLI2_SYNY3	SOS RIBOSOMAL PROTEIN LI2	SYNECHOCYSTIS SP	2-34								

PCGENE	1071/784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILENAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PR12.1	50S RIBOSOMAL PROTEIN L12	Thermotoga maritima	8-35	56-86							
PR12.2	50S RIBOSOMAL PROTEIN L14	Bacillus stearothermophilus	18-45								
PR14.1	50S RIBOSOMAL PROTEIN L14	Micrococcus luteus	18-45								
PR14.2	50S RIBOSOMAL PROTEIN L14	Mycoplasma capricolum	51-92								
PR15.1	50S RIBOSOMAL PROTEIN L15	Bacillus stearothermophilus	21-48								
PR15.2	50S RIBOSOMAL PROTEIN L15	Bacillus subtilis	95-122								
PR15.3	50S RIBOSOMAL PROTEIN L15	Chlamydia trachomatis	110-144								
PR15.4	50S RIBOSOMAL PROTEIN L15	Escherichia coli	79-113								
PR15.5	50S RIBOSOMAL PROTEIN L15	Lactococcus lactis	8-35								
PR15.6	50S RIBOSOMAL PROTEIN L15	Methanococcus vannielii	68-102								
PR15.7	50S RIBOSOMAL PROTEIN L15	Mycoplasma capricolum	63-135								
PR18.1	50S RIBOSOMAL PROTEIN L18	Bacillus stearothermophilus	31-58								
PR18.2	50S RIBOSOMAL PROTEIN L18	Chlamydia trachomatis	32-86								
PR18.3	50S RIBOSOMAL PROTEIN L18	Halobacterium salinarum	80-107								
PR18.4	50S RIBOSOMAL PROTEIN L18	Mycoplasma capricolum	61-88								
PR19.1	50S RIBOSOMAL PROTEIN L19	Escherichia coli	25-52								
PR19.2	50S RIBOSOMAL PROTEIN L19	Halobacterium salinarum	101-128								
PR19.3	50S RIBOSOMAL PROTEIN L19	Methanococcus vannielii	45-72								
PR19.4	50S RIBOSOMAL PROTEIN L19	Proteus vulgaris	159-194								
PR19.5	50S RIBOSOMAL PROTEIN L19	Sulfolobus solfataricus	5-32	184-211							
PR20.1	50S RIBOSOMAL PROTEIN L20	Escherichia coli	14-41								
PR20.2	50S RIBOSOMAL PROTEIN L20	Mycoplasma fermentans	14-41								
PR21.1	50S RIBOSOMAL PROTEIN L21	Bacillus subtilis	4-38								
PR21.2	50S RIBOSOMAL PROTEIN L21	Escherichia coli	28-55								
PR21.3	50S RIBOSOMAL PROTEIN L21	Methanococcus vannielii	30-57								
PR21.4	50S RIBOSOMAL PROTEIN L21	Mycoplasma capricolum	32-59								
PR24.1	50S RIBOSOMAL PROTEIN L24	Halobacterium salinarum	48-75								
PR24.2	50S RIBOSOMAL PROTEIN L24	Methanococcus vannielii	61-90								
PR24.3	50S RIBOSOMAL PROTEIN L24	Micrococcus luteus	36-63								
PR29.1	50S RIBOSOMAL PROTEIN L29	Chlamydia trachomatis	39-66								
PR29.2	50S RIBOSOMAL PROTEIN L29	Escherichia coli	36-63								
PR29.3	50S RIBOSOMAL PROTEIN L29	Mycoplasma capricolum	39-85								
PR4.1	50S RIBOSOMAL PROTEIN L4	Bacillus stearothermophilus	141-168								
PR4.2	50S RIBOSOMAL PROTEIN L4	Mycoplasma capricolum	144-198								
PR5.1	50S RIBOSOMAL PROTEIN L5	Thermus aquaticus	38-65								
PR6.1	50S RIBOSOMAL PROTEIN L6	Bacillus stearothermophilus	79-106								
PR6.2	50S RIBOSOMAL PROTEIN L6	Escherichia coli	19-46								
PR6.3	50S RIBOSOMAL PROTEIN L6	Methanococcus vannielii	129-159								
PR9.1	50S RIBOSOMAL PROTEIN L9	Bacillus stearothermophilus	47-77								
PR9.2	50S RIBOSOMAL PROTEIN L9	Escherichia coli	122-149								
PR10.1	50S RIBOSOMAL PROTEIN L10	Halobacterium salinarum	138-182								
PR10.2	50S RIBOSOMAL PROTEIN L10	Halobacterium salinarum	138-182								
PR10.3	50S RIBOSOMAL PROTEIN L10	Halobacterium salinarum	64-91	153-184							
PR10.4	50S RIBOSOMAL PROTEIN L10	Methanococcus vannielii	194-221								
PR10.5	50S RIBOSOMAL PROTEIN L10	Halobacterium salinarum	59-86								
PR10.6	50S RIBOSOMAL PROTEIN L10	Halobacterium salinarum	2-29								
PR10.7	50S RIBOSOMAL PROTEIN L10	Halobacterium salinarum	2-29								
PR10.8	50S RIBOSOMAL PROTEIN L10	Methanococcus vannielii	2-29								
PR10.9	50S RIBOSOMAL PROTEIN L10	Micrococcus luteus	55-82	90-117							
PR10.10	50S RIBOSOMAL PROTEIN L10	Salmonella typhimurium	226-260								
PR10.11	50S RIBOSOMAL PROTEIN L10	Staphylococcus aureus	3-30	102-132	177-218	266-300					
PR10.12	50S RIBOSOMAL PROTEIN L10	Salmonella typhimurium	19-53								
PR10.13	50S RIBOSOMAL PROTEIN L10	Staphylococcus aureus	3-30	102-133	261-295						
PR10.14	50S RIBOSOMAL PROTEIN L10	Staphylococcus aureus	3-30	146-216							
PR10.15	50S RIBOSOMAL PROTEIN L10	Sulfolobus solfataricus	32-62								
PR10.16	50S RIBOSOMAL PROTEIN L10	Bacillus anthracis	33-67	120-156							

PCGENE	10717814	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRNC_ECOLI	RIBONUCLEASE III	ESCHERICHIA COLI	10-37	117-144							
PRNE_ECOLI	RIBONUCLEASE E	ESCHERICHIA COLI	413-440	628-662							
PRNP7A_BUCAP	RIBONUCLEASE P PROTEIN COMPONENT	BUCHNERA APHIDICOLA	85-114								
PRNP8_BAGSU	RIBONUCLEASE PH	BACILLUS SUBTILIS	159-186								
PRNS_ECOLI	REGULATORY PROTEIN RNS	ESCHERICHIA COLI	116-160								
PRN_BACCI	RIBONUCLEASE	BACILLUS CIRCULANS	82-109								
PRN_BACIN	RIBONUCLEASE PRECURSOR	BACILLUS INTERMEDIUS	38-72								
PRP28_BACTK	RNA POLYMERASE SIGMA-28 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	73-107								
PRP31_CITER	RNA POLYMERASE SIGMA-32 FACTOR	CITROBACTER FREUNDII	30-57								
PRP33_BACTK	RNA POLYMERASE SIGMA-35 FACTOR PRECURSOR	BACILLUS THURINGIENSIS	8-35	63-90							
PRP34_ALCEU	RNA POLYMERASE SIGMA-34 FACTOR	ALCALIGENES EUTROPHUS	229-266								
PRP34_AZOCU	RNA POLYMERASE SIGMA-34 FACTOR	AZORHIZBIUM CAULINODANS	174-208								
PRP34_BACSU	RNA POLYMERASE SIGMA-34 FACTOR	BACILLUS SUBTILIS	16-43	97-124	274-308	396-423					
PRP34_BRAJA	RNA POLYMERASE SIGMA-34 FACTOR 1	BRADYRHIZBIUM JAPONICUM	97-124								
PRP34_KLEPN	RNA POLYMERASE SIGMA-34 FACTOR	KLEBSIELLA PNEUMONIAE	148-182								
PRP34_RHOCA	RNA POLYMERASE SIGMA-34 FACTOR	RHODOBACTER CAPSULATUS	155-185								
PRP35_BRAJA	RNA POLYMERASE SIGMA-34 FACTOR 2	BRADYRHIZBIUM JAPONICUM	145-172								
PRP3M_ALCEU	PROBABLE SIGMA(34) MODULATION PROTEIN	ALCALIGENES EUTROPHUS	21-51								
PRP3M_ECOLI	PROBABLE SIGMA(34) MODULATION PROTEIN	ESCHERICHIA COLI	21-67								
PRP3M_SALTY	PROBABLE SIGMA(34) MODULATION PROTEIN	SALMONELLA TYPHIMURIUM	21-67								
PRP70_BUCAP	RNA POLYMERASE SIGMA-70 FACTOR	BUCHNERA APHIDICOLA	69-96	109-136	173-217	228-255	303-337				
PRP70_CHLTR	RNA POLYMERASE SIGMA-70 FACTOR	CHLAMYDIA TRACHOMATIS	5-32								
PRP70_ECOLI	RNA POLYMERASE SIGMA-70 FACTOR	ESCHERICHIA COLI	327-361								
PRP70_PSEAE	RNA POLYMERASE SIGMA-70 FACTOR	PSEUDOMONAS AERUGINOSA	334-368								
PRP70_RICPR	RNA POLYMERASE SIGMA-70 FACTOR	RICKETTSIA PROWAZEKII	244-321	348-382							
PRP80_MYXXA	RNA POLYMERASE SIGMA-80 FACTOR	MYXOCOCCUS XANTHUS	208-235	318-347	359-386						
PRPCF_SYNPY	BILIN BIOSYNTHESIS PROTEIN PCF	SYNECHOCOCCUS SP	180-207								
PRPOA_BAGSU	DNA-DIRECTED RNA POLYMERASE ALPHA CHAIN	BACILLUS SUBTILIS	55-107								
PRPOA_ECOLI	A-DIRECTED RNA POLYMERASE ALPHA CHAIN	ESCHERICHIA COLI &	57-105								
PRPOA_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	SALMONELLA TYPHIMURIUM									
PRPOA_HALMO	A-DIRECTED RNA POLYMERASE SUBUNIT A	HALOBACTERIUM HALOBIIUM	863-904								
PRPOA_METH	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	HALOCOCCUS MORRHUAE	229-270								
PRPOA_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	METHANOBACTERIUM THERMOAUTOTROPHICUM	218-245	486-513	642-669						
PRPOA_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	SULFOLOBUS ACIDOCALDARIUS	222-256	500-527	693-720						
PRPOB_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	ESCHERICHIA COLI	228-262								
PRPOB_MYCLE	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	MYCOBACTERIUM LEPRAE	599-626	1011-1038							
PRPOB_SALTY	A-DIRECTED RNA POLYMERASE BETA CHAIN	SALMONELLA TYPHIMURIUM	723-760	1084-1111							
PRPOB_SULAC	A-DIRECTED RNA POLYMERASE SUBUNIT B	SULFOLOBUS ACIDOCALDARIUS	599-626	938-965	1011-1038						
PRPOB_THEMA	A-DIRECTED RNA POLYMERASE BETA CHAIN	SULFOLOBUS ACIDOCALDARIUS	160-187	255-282	534-561	827-861					
PRPOC_ANASP	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	THERMOTOGA MARITIMA	350-377								
PRPOC_ECOLI	DNA-DIRECTED RNA POLYMERASE BETA CHAIN	ANABAENA SP	152-194								
PRPOC_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	ESCHERICHIA COLI	786-813	948-994	1221-1257						
PRPOC_HALMO	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOBACTERIUM HALOBIIUM	175-202								
PRPOC_METH	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	HALOCOCCUS MORRHUAE	27-54	117-144	207-234						
PRPOC_MYCLE	A-DIRECTED RNA POLYMERASE BETA CHAIN	METHANOBACTERIUM THERMOAUTOTROPHICUM	58-85	272-302	327-354						
PRPOC_NOSCO	DNA-DIRECTED RNA POLYMERASE GAMMA CHAIN	MYCOBACTERIUM LEPRAE	273-300	860-887	911-938	1131-1158					
PRPOC_SULAC	DNA-DIRECTED RNA POLYMERASE SUBUNIT C	SULFOLOBUS ACIDOCALDARIUS	150-192								
PRPOC_THECE	DNA-DIRECTED RNA POLYMERASE SUBUNIT A	SYNECHOCOCCUS SP	36-63	172-214	224-251						
PRPOD_NOSCO	DNA-DIRECTED RNA POLYMERASE DELTA CHAIN	NOSTOC COMMUNE	22-116	402-449	539-566						
PRPOE_ECOLI	RNA POLYMERASE SIGMA-E FACTOR	ESCHERICHIA COLI	5-39								
PRPOS_ECOLI	RNA POLYMERASE SIGMA FACTOR KATF	ESCHERICHIA COLI	281-308								
PRPOU_HALHA	DNA-DIRECTED RNA POLYMERASE SUBUNIT B	HALOBACTERIUM HALOBIIUM	91-118								
PRPSA_AGRTU	RNA POLYMERASE SIGMA-A FACTOR	AGROBACTERIUM TUMEFACIENS	310-347	397-427							
PRPSA_ANASP	RNA POLYMERASE SIGMA-A FACTOR	ANABAENA SP	71-105								
PRPSA_CLOAB	RNA POLYMERASE SIGMA-A FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	2-29								
PRPSA_STRAU	RNA POLYMERASE SIGMA FACTOR RPOD	STREPTOMYCES AUREOFACIENS	278-303								

PCGENE	107178.4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PRPSB_ANASP	RNA POLYMERASE SIGMA-B FACTOR	ANABAENA SP	4-31								
PRPSB_BACSU	RNA POLYMERASE SIGMA-B FACTOR	BACILLUS SUBTILIS	5-35	169-196	200-230						
PRPSB_MYXXA	RNA POLYMERASE SIGMA-B FACTOR	MYXOCOCCUS XANTHUS	47-74								
PRPSB_STIAU	RNA POLYMERASE SIGMA-B FACTOR	STIGMATELLA AURANTIACA	96-123								
PRPSC_ANASP	RNA POLYMERASE SIGMA-C FACTOR	ANABAENA SP	58-85								
PRPSC_BACSU	RNA POLYMERASE SIGMA-D FACTOR	BACILLUS SUBTILIS	192-249								
PRPSE_CLOAB	RNA POLYMERASE SIGMA-E FACTOR	CLOSTRIDIUM ACETOBUTYLICUM	63-90								
PRPSE_BACLI	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS LICHENIFORMIS	14-41	116-160							
PRPSE_BACME	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS NEGATERIUM	191-225	191-248							
PRPSF_BACSU	RNA POLYMERASE SIGMA-F FACTOR	BACILLUS SUBTILIS	4-31	191-248							
PRPSH_BACLI	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS LICHENIFORMIS	191-218								
PRPSH_BACSU	RNA POLYMERASE SIGMA-H FACTOR	BACILLUS SUBTILIS	186-213								
PRPSK_BACSU	RNA POLYMERASE SIGMA-K FACTOR	BACILLUS SUBTILIS	75-109	189-216							
PRPSP_STAAU	RNA POLYMERASE SIGMA-PLAC	STAPHYLOCOCCUS AUREUS	19-46								
PRPSW_STRCO	RNA POLYMERASE SIGMA FACTOR WHIG	STREPTOMYCES COELICOLOR	232-273								
PRPSX_BACTK	POSSIBLE RNA POLYMERASE SIGMA-G FACTOR	BACILLUS THURINGIENSIS	33-60								
PRSID_ECOLI	30S RIBOSOMAL PROTEIN S10	ESCHERICHIA COLI	3-30								
PRSI1_BACSU	30S RIBOSOMAL PROTEIN S11	BACILLUS SUBTILIS	8-42								
PRSI3_BACSU	30S RIBOSOMAL PROTEIN S13	BACILLUS SUBTILIS	44-85								
PRSI7_METYA	30S RIBOSOMAL PROTEIN S17	METHANOCOCCUS VANNIELII	34-73								
PRSI1_ECOLI	30S RIBOSOMAL PROTEIN S1	ESCHERICHIA COLI	99-126	144-171							
PRSI1_PROSP	30S RIBOSOMAL PROTEIN S1	PROVIDENCIA SP	39-66	265-292	349-376						
PRSI1_RHIME	30S RIBOSOMAL PROTEIN S1	RHIZOBIUM MELLEOTI	91-125	172-217							
PRSI1_BACST	30S RIBOSOMAL PROTEIN S21	BACILLUS STEAROTHERMOPHILUS	1-28								
PRSI2_SPICI	30S RIBOSOMAL PROTEIN S2	SPIROPLASMA CITRI	91-125								
PRSI3_ACHLA	30S RIBOSOMAL PROTEIN S3	ACHOLEPLASMA LAIDLAWII	83-110								
PRSI3_MYCCA	30S RIBOSOMAL PROTEIN S3	MYCOPLASMA CAPRICOLUM	77-106	136-163							
PRSI4_ECOLI	30S RIBOSOMAL PROTEIN S4	ESCHERICHIA COLI	50-77								
PRSI5_HALMA	30S RIBOSOMAL PROTEIN S5	HALOARCTULA MARISMORTUI	160-187								
PRSI5_MYCCA	30S RIBOSOMAL PROTEIN S5	MYCOPLASMA CAPRICOLUM	35-62	182-216							
PRSI6_THETH	30S RIBOSOMAL PROTEIN S6	THERMUS AQUATICUS	16-43								
PRSI7_METYA	30S RIBOSOMAL PROTEIN S7	METHANOCOCCUS VANNIELII	69-96								
PRSI7_MYCLE	30S RIBOSOMAL PROTEIN S7	MYCOBACTERIUM LEPRAE	22-49								
PRSI8_MICLU	30S RIBOSOMAL PROTEIN S8	MICROCOCCUS LUTEUS	103-130								
PRSI8_MYCCA	30S RIBOSOMAL PROTEIN S8	MYCOPLASMA CAPRICOLUM	41-78								
PRSGA_ECOLI	FERRITIN LIKE PROTEIN	ESCHERICHIA COLI	80-107								
PRIG7_ECOLI	RNA-DIRECTED DNA POLYMERASE	ESCHERICHIA COLI	225-268								
PSACB_BACAM	LEVANSUCRASE PRECURSOR	BACILLUS AMYLOLIQUEFACIENS	175-202	254-281							
PSACB_BACSU	LEVANSUCRASE PRECURSOR	BACILLUS SUBTILIS	175-202	254-288							
PSACB_STRMU	LEVANSUCRASE PRECURSOR	STREPTOCOCCUS MUTANS	31-65	155-189	314-369						
PSACQ_BACLI	SACQ REGULATORY FACTOR	BACILLUS LICHENIFORMIS	2-46								
PSACT_BACSU	SACPA OPERON ANTITERMINATOR	BACILLUS SUBTILIS	102-129	189-216							
PSAGP_STRPY	STREPTOCOCCAL ACID GLYCOPROTEIN	STREPTOCOCCUS PYOGENES	294-331	362-389							
PSAOX_BACSN	SARCOSINE OXIDASE	BACILLUS SP	350-377								
PSAS2_CLOBI	SPORE PROTEIN	CLOSTRIDIUM BIFERMENTANS	17-47								
PSASG_BACCE	SPORE PROTEIN GAMMA-TYPE	BACILLUS CEREUS	31-58								
PSASG_BACST	SPORE PROTEIN GAMMA-TYPE	BACILLUS STEAROTHERMOPHILUS	37-64								
PSBCC_ECOLI	EXONUCLEASE SBCC	ESCHERICHIA COLI	218-260	337-364	535-585	622-656	778-812	821-865	915-942		
PSBCD_ECOLI	EXONUCLEASE SBCC	ESCHERICHIA COLI	137-164	334-397							
PSBM_ECOLI	SBM PROTEIN	ESCHERICHIA COLI	5-32	436-470	553-580						
PSBP_BACSU	SBP PROTEIN	BACILLUS SUBTILIS	28-55								
PSCPA_STRPY	CIA PEPTIDASE PRECURSOR	STREPTOCOCCUS PYOGENES	126-160	784-811	831-880						
PSCRB_KLEPN	SUCROSE-6-PHOSPHATE HYDROLASE	KLEBSIELLA PNEUMONIAE	174-201								
PSCRB_LACLA	SUCROSE-6-PHOSPHATE HYDROLASE	LACTOCOCCUS LACTIS	182-217	354-385	395-422						
PSCRB_STRMU	SUCROSE-6-PHOSPHATE HYDROLASE	STREPTOCOCCUS MUTANS	335-362								
PSCRK_SALTH	FRUCTOKINASE	SALMONELLA THOMPSON	97-124								

PCGENE	10717824	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8
PSCKR_SALTY	FRUCTOKINASE	SALMONELLA TYPHIMURUM	183-210							
PSCKR_KLEPN	SUCROSE PORIN PRECURSOR	KLEBSIELLA PNEUMONIAE	61-88	240-267						
PSCKR_SALTY	SUCROSE PORIN PRECURSOR	SALMONELLA TYPHIMURUM	16-34	61-88	240-267					
PSECA_BACSU	PREPROTEIN TRANSLOCASE SECA SUBUNIT	BACILLUS SUBTILIS	12-39	226-260						
PSECA_ECOLI	PREPROTEIN TRANSLOCASE SECA SUBUNIT	ESCHERICHIA COLI	360-387	453-481						
PSECB_ECOLI	PROTEIN-EXPORT PROTEIN SECB	ESCHERICHIA COLI	41-68							
PSECD_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECD	ESCHERICHIA COLI	46-73	378-412						
PSECF_ECOLI	PROTEIN-EXPORT MEMBRANE PROTEIN SECF	ESCHERICHIA COLI	174-201							
PSECY_ECOLI	PREPROTEIN TRANSLOCASE SECY SUBUNIT	ESCHERICHIA COLI	101-128							
PSECY_METLA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	LACTOCOCCUS LACTIS	401-430							
PSECY_METLA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	METHANOCOCCUS VANNIELII	131-161	396-423						
PSECY_STACA	PREPROTEIN TRANSLOCASE SECY SUBUNIT	STAPHYLOCOCCUS CARNOSUS	149-191							
PSEFC_SALEN	SEFC PROTEIN PRECURSOR	SALMONELLA ENTERITIDIS	137-164	475-535						
PSEKA_BACSU	DE-1-PHOSPHOGLYCERATE DEHYDROGENASE	BACILLUS SUBTILIS	16-43	347-374						
PSFAA_ECOLI	S-FIMBRIAL PROTEIN SUBUNIT PRECURSOR	ESCHERICHIA COLI	11-38							
PSFSA_ECOLI	SUGAR FERMENTATION STIMULATION PROTEIN	ESCHERICHIA COLI	81-115							
PSFUA_SERMA	IRON-TRANSPORT SFUA PROTEIN PRECURSOR	SERRATIA MARCESCENS	34-61							
PSHUI_ECOLI	SHUFFLON PROTEIN A	ESCHERICHIA COLI	224-262							
PSHU2_ECOLI	SHUFFLON PROTEIN A'	ESCHERICHIA COLI	224-262							
PSHU3_ECOLI	SHUFFLON PROTEIN B	ESCHERICHIA COLI	224-262							
PSHU4_ECOLI	SHUFFLON PROTEIN B'	ESCHERICHIA COLI	224-262							
PSHU5_ECOLI	SHUFFLON PROTEIN C	ESCHERICHIA COLI	224-262	402-429						
PSHU6_ECOLI	SHUFFLON PROTEIN C	ESCHERICHIA COLI	224-262							
PSHU7_ECOLI	SHUFFLON PROTEIN D	ESCHERICHIA COLI	224-262							
PSNR_BACLI	SINR PROTEIN	BACILLUS LUTIFICANS	9-36	43-80						
PSNR_BACSU	SINR PROTEIN	BACILLUS SUBTILIS	9-36	43-70						
PSLAP_ACEKI	CELL SURFACE PROTEIN PRECURSOR	ACETOGENUM KIVUI	237-264	282-309	313-453	458-489	517-544	563-593	641-685	726-753
PSLPA_ECOLI	PROPHAGE CPA-57 INTEGRASE	ESCHERICHIA COLI	93-136							
PSNF_ECOLI	SNF PROTEIN	ESCHERICHIA COLI	24-51							
PSNFB_ECOLI	SMALL PROTEIN B	ESCHERICHIA COLI	27-61	90-117						
PSNP_ECOLI	SNP PROTEIN PRECURSOR	ESCHERICHIA COLI	71-98							
PSMTB_SYN7	TRANSCRIPTIONAL REPRESSOR SM7B	SYNECHOCOCCUS SP	62-96							
PSODF_COXBU	SUPEROXIDE DISMUTASE	COXIELLA BURNETII	116-143							
PSODF_ECOLI	SUPEROXIDE DISMUTASE	ESCHERICHIA COLI	115-142							
PSODF_METH	SUPEROXIDE DISMUTASE	METHANOBACTERIUM THERMAUTOTROPHICUM	25-52							
PSODF_PHOLE	SUPEROXIDE DISMUTASE	PHOTOBACTERIUM LEIGNATHII	22-63							
PSODM_PROFR	SUPEROXIDE DISMUTASE	PROFIBACTERIUM FREUDENKREIHI	164-191							
PSOHB_ECOLI	SOHB PROTEIN PRECURSOR	ESCHERICHIA COLI	7-48	70-97	273-300					
PSOPB_ECOLI	SOPB PROTEIN	ESCHERICHIA COLI	252-279							
PSOXR_ECOLI	SOXR PROTEIN	ESCHERICHIA COLI	16-63							
PSPJ_BACSU	STAGE II SPORULATION PROTEIN J	BACILLUS SUBTILIS	131-158							
PSPJ_A_BACME	STAGE II SPORULATION PROTEIN AA	BACILLUS MEGATERIUM	19-53							
PSPJ_A_BACSU	STAGE II SPORULATION PROTEIN AA	BACILLUS SUBTILIS	21-55							
PSPJ_B_BACLI	STAGE II SPORULATION PROTEIN AB	BACILLUS LICHENIFORMIS	42-69							
PSPJ_B_BACME	STAGE II SPORULATION PROTEIN AB	BACILLUS MEGATERIUM	36-73							
PSPJ_D_BACSU	STAGE II SPORULATION PROTEIN D	BACILLUS SUBTILIS	134-161							
PSPJG_BACTK	POSSIBLE ASPARTYL PROTEASE	BACILLUS THURINGIENSIS	4-36	117-144						
PSPJ_BACSU	STAGE II SPORULATION PROTEIN J	BACILLUS SUBTILIS	14-44	463-500						
PSPJ_D_BACSU	STAGE III SPORULATION PROTEIN D	BACILLUS SUBTILIS	9-36	52-86						
PSPJ_BACSU	STAGE III SPORULATION PROTEIN J	BACILLUS SUBTILIS	44-75							
PSPJ_A_BACSU	STAGE IV SPORULATION PROTEIN A	BACILLUS SUBTILIS	139-180							
PSPJ_B_BACSU	STAGE IV SPORULATION PROTEIN B	BACILLUS SUBTILIS	39-66							
PSPJ_D_BACSU	STAGE IV SPORULATION PROTEIN D	BACILLUS SUBTILIS	251-278							
PSPJ_A_BACSU	STAGE V SPORULATION PROTEIN A	BACILLUS SUBTILIS	9-36							
PSPJ_B_BACSU	STAGE V SPORULATION PROTEIN B	BACILLUS SUBTILIS	184-218							
PSPJ_D_BACSU	STAGE V SPORULATION PROTEIN D	BACILLUS SUBTILIS	181-208							
PSPJ_A_BACSU	STAGE V SPORULATION PROTEIN A	BACILLUS SUBTILIS	311-338							

PCGENE	1071178.4	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE_NAME	PROTEIN	ORGANISM									
PSPAK_BACSU	SENSOR PROTEIN SPK	BACILLUS SUBTILIS	80-107	224-231	290-324						
PSPAP_STRMU	CELL SURFACE ANTIGEN I/II PRECURSOR	STREPTOCOCCUS MUTANS	122-276	281-465	538-565	576-630	1071-1098	1155-1182	1377-1430		
PSPAR_BACSU	REGULATORY PROTEIN	BACILLUS SUBTILIS	4-31	172-199							
PSPAT_BACSU	SUBTILIN TRANSPORT PROTEIN SPAT	BACILLUS SUBTILIS	55-82	226-267							
PSPEC_STRPY	EXOTOXIN TYPE C PRECURSOR	STREPTOCOCCUS PYOGENES	12-39								
PSPIR_SPICI	SPIRALIN	STREPTOCOCCUS PYOGENES	82-109	155-182							
PSPIR_SPIKE	SPIRALIN	STREPTOCOCCUS PYOGENES	195-222								
PSPTP_ECOLI	GUAN-3'-5'-BIS(DIPHOS) 3'-PYROPHOSPHOHYDROLA	ESCHERICHIA COLI	637-664								
PSPPA_ECOLI	PROTEASE IV	ESCHERICHIA COLI	278-305								
PSQHC_ZYMOHO	SQUALENE-HOPENE CYCLASE	ZYMONONAS MOBILIS	590-617								
PSRFA_BACSU	SURFACTIN SYNTHETASE SUBUNIT A	BACILLUS SUBTILIS	159-186	244-271							
PSRP5_ECOLI	SIGNAL RECOGNITION PARTICLE PROTEIN	ESCHERICHIA COLI	301-328								
PSRP5_MYOMY	SIGNAL RECOGNITION PARTICLE PROTEIN	MYCOPLASMA MYCOIDES	21-45	107-141	394-428						
PSSA1_PASHA	SEROTYPE-SPECIFIC ANTIGEN I PRECURSOR	PASTURELLA HAEMOLYTICA	151-178	358-385	465-518	529-570	860-904				
PSSAB_STRPA	ADHESIN B PRECURSOR	STREPTOCOCCUS PARASANGUIS	32-59								
PSSAB_STRSA	ADHESIN B PRECURSOR	STREPTOCOCCUS SANGUIS	21-59	101-128							
PSSB_ECOLI	SINGLE-STRAND BINDING PROTEIN	ESCHERICHIA COLI	68-95								
PSSB_PROMI	SINGLE-STRAND BINDING PROTEIN	PROTEUS MIRABILIS	63-104								
PSSB_SERMA	SINGLE-STRAND BINDING PROTEIN	SERRATIA MARCESCENS	63-104								
PSSP5_STRSA	AGGLUTININ RECEPTOR PRECURSOR	STREPTOCOCCUS SANGUIS	131-173	178-287	295-483	565-592	676-710	1081-1131			
PSTAV_STRAV	STREPTAVIDIN PRECURSOR	STREPTOMYCES AVIDINII	125-152								
PSTA_ECOLI	STREPTOTHRONIN ACETYL-TRANSFERASE	ESCHERICHIA COLI	66-93								
PSTCI_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-117	172-199	280-311						
PSTC2_STAAU	STAPHYLOCOAGULASE PRECURSOR	STAPHYLOCOCCUS AUREUS	90-117	264-291							
PSTC_CLOBE	L-TRANS TRANS CONTROL PROTEIN	CLOSTRIDIUM BEIJERINCKII	47-74								
PSTPA_ECOLI	STPA PROTEIN	ESCHERICHIA COLI	36-63								
PSTR1_STRGR	INOSAMINE-PHOSPHATE AMIDINOTRANSFERASE I	STREPTOMYCES GRISEUS	183-210								
PSTRP_STRQV	STREPTOKINASE C PRECURSOR	STREPTOCOCCUS EQUISIMILIS	209-236	281-308							
PSTRP_STRPY	STREPTOKINASE A PRECURSOR	STREPTOCOCCUS PYOGENES	209-236								
PSTRP_STRSP	STREPTOKINASE G PRECURSOR	STREPTOCOCCUS SP	209-236	281-308							
PSUBE_BACSU	MINOR EXTRACELLULAR PROTEASE EPR PREC	BACILLUS SUBTILIS	435-462	522-563	605-639						
PSUBF_BACSU	BACILLOPEPTIDASE F PRECURSOR	BACILLUS SUBTILIS	40-67	89-116	121-148	554-597					
PSUBI_SALTY	SULFATE-BINDING PROTEIN	SALMONELLA TYPHIMURUM	37-74								
PSUBI_SYNP7	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCYSTIS SP	63-94								
PSUBI_SYNV3	SULFATE-BINDING PROTEIN PRECURSOR	SYNECHOCYSTIS SP	64-91								
PSUBT_BACLI	SUBTILISIN CARLSBERG PRECURSOR	BACILLUS LICHENIFORMIS	191-222								
PSUBT_BACMS	SUBTILISIN	BACILLUS MESENTERICUS	91-118								
PSUBT_BACSP	SUBTILISIN PRECURSOR	BACILLUS SP	36-63	250-277							
PSUBT_BACSA	SUBTILISIN AMYLOSACCHARITICUS PRECURSOR	BACILLUS SUBTILIS	197-224								
PSUBT_BACSD	SUBTILISIN	BACILLUS SUBTILIS	86-117								
PSUBT_BACST	SUBTILISIN I PRECURSOR	BACILLUS STEAROTHERMOPHILUS	197-224								
PSUBT_BACSU	SUBTILISIN E PRECURSOR	BACILLUS SUBTILIS	197-224								
PSUBIV_BACSU	MINOR EXTRACELLULAR PROTEASE VPR PREC	BACILLUS SUBTILIS	55-108	613-654	741-768						
PSUCC_ECOLI	SUCCINYL-COA SYNTHETASE BETA	ESCHERICHIA COLI	62-89								
PSUCP_AGRVI	SUCROSE PHOSPHORYLASE	AGROBACTERIUM VITIS	449-476								
PSULA_ENTAE	CELL DIVISION INHIBITOR	ENTEROBACTER AEROGENES	112-139								
PSYA_ECOLI	ALANYL-TRNA SYNTHETASE	ESCHERICHIA COLI	257-287	725-752	790-821						
PSYD_ECOLI	ASPARTYL-TRNA SYNTHETASE	ESCHERICHIA COLI	330-357								
PSYE_BACST	GLUTAMYL-TRNA SYNTHETASE	BACILLUS STEAROTHERMOPHILUS	49-76								
PSYE_BACQU	GLUTAMYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	49-76	351-386							
PSYE_THETH	GLUTAMYL-TRNA SYNTHETASE	THERMUS AQUATICUS	403-432								
PSYFA_BACSU	PHENYLALANYL-TRNA SYNTHETASE A CHAIN	BACILLUS SUBTILIS	7-34								
PSYFB_BACSU	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	BACILLUS SUBTILIS	340-367	407-441							
PSYFB_ECOLI	PHENYLALANYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	546-573	607-634	744-771						
PSYGB_ECOLI	GLYCYL-TRNA SYNTHETASE BETA CHAIN	ESCHERICHIA COLI	354-381	487-514							
PSYH_STRQV	HISTIDYL-TRNA SYNTHETASE	STREPTOCOCCUS EQUISIMILIS	376-403								
PSYT_METTH	ISOLEUCYL-TRNA SYNTHETASE	METHANOBACTERIUM THERMOAUTOTROPHICUM	1010-1037								

PCGENE	107a178d	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PSYK1_ECOLI	LYSYL-TRNA SYNTHETASE	ESCHERICHIA COLI	283-310								
PSYK2_ECOLI	LYSYL-TRNA SYNTHETASE, HEAT INDUCIBLE	ESCHERICHIA COLI	45-72	283-310							
PSYL1_ECOLI	LEUCYL-TRNA SYNTHETASE	ESCHERICHIA COLI	220-247								
PSYM1_BACST	METHIONYL-TRNA SYNTHETASE	BACILLUS STEAROTHERIOPHILUS	69-99								
PSYM1_ECOLI	METHIONYL-TRNA SYNTHETASE	ESCHERICHIA COLI	87-124								
PSYP1_ECOLI	PROLYL-TRNA SYNTHETASE	ESCHERICHIA COLI	541-568								
PSYQ1_ECOLI	GLUTAMINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	394-421								
PSYRD_PSEY	SYRD PROTEIN	PSUDOMONAS SYRINGAE	449-483								
PSYR1_ECOLI	ARGINYL-TRNA SYNTHETASE	ESCHERICHIA COLI	540-574								
PSYT1_BACSU	THREONYL-TRNA SYNTHETASE	BACILLUS SUBTILIS	401-428	605-639							
PSYV1_BACST	VALYL-TRNA SYNTHETASE	BACILLUS STEAROTHERIOPHILUS	603-630	809-843							
PSYV1_ECOLI	VALYL-TRNA SYNTHETASE	ESCHERICHIA COLI	300-327	882-912	924-951						
PSYW1_BACST	TRYPTOPHANYL-TRNA SYNTHETASE	BACILLUS STEAROTHERIOPHILUS	204-231	239-266							
PSYV1_BACSU	TYROSYL-TRNA SYNTHETASE 1	BACILLUS SUBTILIS	81-115	375-409							
PSYV2_BACSU	TYROSYL-TRNA SYNTHETASE 2	BACILLUS SUBTILIS	69-96								
PSYV1_BACST	TYROSYL-TRNA SYNTHETASE	BACILLUS CALDOTTENAX	295-322	372-416							
PTIM1_ECOLI	ENZYME ECOR1240 I M PROTEIN	BACILLUS STEAROTHERIOPHILUS	295-322	372-416							
PTIR1_ECOLI	ENZYME ECOR1240 R PROTEIN	ESCHERICHIA COLI	126-167	405-432							
PTIR1_ECOLI	ENZYME ECOR1240 R PROTEIN	ESCHERICHIA COLI	30-57	624-651	702-736	768-795	843-870	966-1000			
PTIR1_ECOLI	ENZYME ECOR1240 R PROTEIN	ESCHERICHIA COLI	138-263								
PTIS1_ECOLI	ENZYME ECOR1240 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	154-181								
PTISA_ECOLI	ENZYME ECOR1240 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
PTISB_ECOLI	ENZYME ECOR1240 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	278-312								
PTISD_ECOLI	ENZYME ECOR1240 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	249-283								
PTISE_ECOLI	ENZYME ECOR1240 I SPECIFICITY PROTEIN	ESCHERICHIA COLI	279-306								
PTIS1_SALPO	ENZYME SPECIFICITY PROTEIN	SALMONELLA POTSDAM	306-423								
PTIS1_SALTY	ENZYME SPECIFICITY PROTEIN	SALMONELLA TYPHIMURUM	194-221	276-304	402-429						
PT371_ECOLI	TYPE II RESTRICTION ENZYME ECO371	ESCHERICHIA COLI	138-196	265-295	406-440	639-682	687-728	926-954			
PT2B1_BACSU	TYPE II RESTRICTION ENZYME BSUFI	BACILLUS SUBTILIS	3-43	135-223	236-280						
PT2B1_BACSU	TYPE II RESTRICTION ENZYME BSUFI	BACILLUS SUBTILIS	3-45	338-384	401-430	532-559					
PT2C1_CITR	TYPE II RESTRICTION ENZYME CFBFI	CITROBACTER FREUNDII	35-62								
PT2C1_HERAU	TYPE II RESTRICTION ENZYME HGICI	HERPETOSPHON AURANTIACUS	176-215								
PT2C2_HERAU	TYPE II RESTRICTION ENZYME HGICII	HERPETOSPHON AURANTIACUS	243-273								
PT2D1_DESDN	TYPE II RESTRICTION ENZYME DDEI	DESULFOVIBRIO DESULFURICANS	85-122								
PT2D1_STRPN	TYPE II RESTRICTION ENZYME DPN1	STREPTOCOCCUS PNEUMONIAE	213-240								
PT2E1_ECOLI	TYPE II RESTRICTION ENZYME ECOR1	ESCHERICHIA COLI	2-29								
PT2E2_ECOLI	TYPE II RESTRICTION ENZYME ECORII	ESCHERICHIA COLI	333-360								
PT2E3_ECOLI	TYPE II RESTRICTION ENZYME ECORV	ESCHERICHIA COLI	128-155	214-241							
PT2F1_FLACK	TYPE II RESTRICTION ENZYME FOKI	FLAVOBACTERIUM OKEANOKOITES	302-336								
PT2H1_HAEIN	TYPE II RESTRICTION ENZYME HINF1	HAEMOPHILUS INFLUENZAE	6-38	60-96							
PT2I11_HAEPA	TYPE II RESTRICTION ENZYME HPA1	HAEMOPHILUS PARAINFLUENZAE	77-125								
PT2I12_HAEIIA	TYPE II RESTRICTION ENZYME HPAII	HAEMOPHILUS HAEMOLYTICUS	23-30								
PT2H2_HAEIN	TYPE II RESTRICTION ENZYME HINCII	HAEMOPHILUS INFLUENZAE	97-138								
PTK11_KLEPN	TYPE II RESTRICTION ENZYME KPN1	KLEBSIELLA PNEUMONIAE	18-45	178-205							
PT2M1_MORBO	TYPE II RESTRICTION ENZYME MBOI	MORAXELLA BOVIS	15-61	187-215	225-232						
PT2M2_MORBO	TYPE II RESTRICTION ENZYME MBOII	MORAXELLA BOVIS	3-30	158-185	337-364						
PT2M2_METTF	POSSIBLE TYPE II RESTRICTION ENZYME MTHZI	METHANOBACTERIUM THERMOPHILICUM	105-151								
PT2NG_NEICO	TYPE II RESTRICTION ENZYME NGOPII	NEISSERIA GONORRHOEA	117-144	231-258							
PT2S1_STRSA	TYPE II RESTRICTION ENZYME STSI	STREPTOCOCCUS SANGUIS	5-32	41-68	395-446						
PT2S2_SHISO	TYPE II RESTRICTION ENZYME SSOII	SHIGELLA SONNEI	206-243	258-288							
PT2S3_STAUI	TYPE II RESTRICTION ENZYME SAUIAI	STAPHYLOCOCCUS AUREUS	70-102								
PT2S1_SALJN	TYPE II RESTRICTION ENZYME SINI	SALMONELLA INFANTIS	144-181								
PT2S1_SERMA	TYPE II RESTRICTION ENZYME SMAI	SERRATIA MARCESCENS	61-88								
PT2TA_THAQ	TYPE II RESTRICTION ENZYME TAOI	THERMUS AQUATICUS	147-181	203-237							
PT2MO_ECOLI	SYSTEM ECOPI1 ENZYME MOD	ESCHERICHIA COLI	37-71	236-296	378-405						
PT2RE_BACCE	SYSTEM ENZYME RES	BACILLUS CEREUS	62-89	256-283							

PCGENE	107178.4	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILE NAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PTA47 TREPA	47 KD MEMBRANE ANTIGEN PRECURSOR	TREPONEMA PALLIDUM	26-53								
PTA51 TREDE	59 KD MEMBRANE ANTIGEN A PRECURSOR	TREPONEMA DENTICOLA	99-126	298-329							
PTAC3 BACAL	ALVEOLYNSIN PRECURSOR	BACILLUS ALVEI	372-401	372-401							
PTAC3 CLOPE	PERFERUNGOLYNSIN O PRECURSOR	CLOSTRIDIUM PERFRINGENS	270-311	372-434							
PTAC3 LIVIS	IVANOLYNSIN PRECURSOR	LISTERIA IVANOVII	93-120	167-195	396-423						
PTAC3 LISMO	LISTERIOLYNSIN O PRECURSOR	LISTERIA MONOCYTOGENES	98-125	168-196	295-329	397-474					
PTAC3 LISSE	SEELIGERIOLYNSIN PRECURSOR	LISTERIA SEELIGERI	99-126	296-323	349-376	398-463					
PTAC3 STRPN	PNEUMOLYNSIN	STREPTOCOCCUS PNEUMONIAE	234-272								
PTAC3 STRPY	STREPTOLYNSIN O PRECURSOR	STREPTOCOCCUS PYOGENES	86-133	355-382	440-470						
PTAGB BACSU	TECHOIC ACID BIOSYN PROTEIN B PREC	BACILLUS SUBTILIS	42-69								
PTAGC BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN C	BACILLUS SUBTILIS	348-375								
PTAGE BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN E	BACILLUS SUBTILIS	59-93	144-181	185-243	565-592	600-627				
PTAGF BACSU	TECHOIC ACID BIOSYNTHESIS PROTEIN F	BACILLUS SUBTILIS	182-209								
PTBP1 NEIGO	TRANSFERRIN-BINDING PROTEIN 1 PRECURSOR	NEISSERIA GONORRHOEAE	39-73	137-164	398-425	810-841					
PTBUD PSEPI	PHENOL 2-MONOXYGENASE	PSEUDOMONAS PICKETTII	38-65	227-254	375-402						
PTCDT SALT	TRANSCRIPTIONAL REGULATORY PROTEIN TCDT	SALMONELLA TYPHIMURUM	105-132								
PTCPC VIBCH	MEMBRANE PROTEIN TPCP PRECURSOR	VIBRIO CHOLERAE	20-47	83-128	199-233	263-290	344-375	459-486			
PTCPE VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPE	VIBRIO CHOLERAE	24-59	77-111							
PTCPF VIBCH	TCP PILUS SECRETION PROTEIN TCPF	VIBRIO CHOLERAE	32-66	211-238							
PTCPH VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPH	VIBRIO CHOLERAE	95-122								
PTCPI VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPI	VIBRIO CHOLERAE	25-52	234-261	279-306	346-379					
PTCPN VIBCH	TCP PILUS VIRULENCE REGULATORY PROTEIN	VIBRIO CHOLERAE	48-75								
PTCPO VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPO	VIBRIO CHOLERAE	230-257								
PTCPY VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPY	VIBRIO CHOLERAE	121-148								
PTCPZ VIBCH	TCP PILUS BIOSYNTHESIS PROTEIN TCPZ	VIBRIO CHOLERAE	44-85								
PTCR2 BACSU	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS SUBTILIS	404-434								
PTCR BACST	TETRACYCLINE RESISTANCE PROTEIN	BACILLUS STEAROTHERMOPHILUS	422-453								
PTCR STAAU	TETRACYCLINE RESISTANCE PROTEIN	STAPHYLOCOCCUS AUREUS	404-431								
PTCR STRAG	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS AGALACTIAE	422-453								
PTCR STRPN	TETRACYCLINE RESISTANCE PROTEIN	STREPTOCOCCUS PNEUMONIAE	422-453								
PTDCA ECOLI	TDCABC OPERON TRANSCRIPTIONAL ACTIVATOR	ESCHERICHIA COLI	210-239								
PTDCC ECOLI	TDCCC PROTEIN	ESCHERICHIA COLI	334-361								
PTES6 STRPY	TRYPSIN-RESIST SURFACE T6 PROTEIN PREC	STREPTOCOCCUS PYOGENES	137-164	361-395	400-437						
PTER2 ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS B	ESCHERICHIA COLI	8-36								
PTER4 ECOLI	TETRACYCLINE REPRESSOR PROTEIN CLASS D	ESCHERICHIA COLI	183-210								
PTERA ALGSP	TELLURIUM RESISTANCE PROTEIN TERA	ALCALIGENES SP	48-86								
PTESB ECOLI	ACYL-COA THIOESTERASE II	ESCHERICHIA COLI	4-31								
PTET3 ENTFA	TETRACYCLINE RESISTANCE PROTEIN TETM	ENTEROCOCCUS FAECALIS	2-36	130-159	179-206	217-244					
PTET9 ENTFA	TETRACYCLINE RESISTANCE PROTEIN TETM	ENTEROCOCCUS FAECALIS	2-36	130-159	217-244	260-287					
PTETC ECOLI	TRANSPOSON TN10 TETC PROTEIN	ESCHERICHIA COLI	72-106	116-158							
PTETM STRLI	TETRACYCLINE RESISTANCE PROTEIN	STREPTOMYCES LIVIDANS	82-109								
PTETM UREUR	TETRACYCLINE RESISTANCE PROTEIN TETM	UREAPLASMA UREALYTICUM	2-36	130-159	217-244	260-287					
PTETO CAMIE	TETRACYCLINE RESISTANCE PROTEIN TETO	CAMPYLOBACTER COLI	2-29								
PTETO CAMIE	TETRACYCLINE RESISTANCE PROTEIN TETO	CAMPYLOBACTER JEJUNI	2-36								
PTETO STRMU	TETRACYCLINE RESISTANCE PROTEIN TETO	STREPTOCOCCUS MUTANS	2-29								
PTETX BACFR	TETRACYCLINE RESISTANCE PROTEIN	BACTEROIDES FRAGILIS	35-62								
PTETX CLOTE	TETANUS TOXIN PRECURSOR	CLOSTRIDIUM TETANI	274-304	540-567	615-642	692-719	985-1012	1240-1277			
PTFJB PYRWO	TRANS INITIATION FACTOR IIB HOMOLOG	PYROCOCCUS WOESSEI	218-258								
PTFDC ALCEU	CHLOROACETOL 1,2-DIOXYGENASE	ALCALIGENES EUTROPHUS	2-33								
PTGT ECOLI	QUEUINE TRNA-RIBOSYLTRANSFERASE	ESCHERICHIA COLI	173-200								
PTHD1 LACLA	THREONINE DEHYDRATASE BIOSYNTHETIC	LACTOCOCCUS LACTIS	267-303								
PTHD2 ECOLI	THREONINE DEHYDRATASE CATABOLIC	ESCHERICHIA COLI	293-320								
PTHDF BACSU	FURAN OXIDATION PROTEIN THDF	BACILLUS SUBTILIS	133-180	192-226	282-316	391-418					
PTHDF ECOLI	FURAN OXIDATION PROTEIN THDF	ESCHERICHIA COLI	226-260	404-431							
PTHDF PSEPU	FURAN OXIDATION PROTEIN THDF	PSEUDOMONAS PUTIDA	226-260								
PTHER BACCE	THERMOLYNSIN	BACILLUS CEREUS	4-58	240-267							
PTHER BACST	THERMOLYNSIN PRECURSOR	BACILLUS STEAROTHERMOPHILUS	45-72								

PCGENE	10717814	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PTHER_BACTH	THERMOLYSIN	BACILLUS THERMOPROTEOLYTICUS	86-113								
PTHERI_THEVU	THERMILYSE	THERMOACTINOMYCES VULGARIS	131-161								
PTHC_ECOLI	THIC PROTEIN	ESCHERICHIA COLI	232-263	301-328							
PTHIG_ECOLI	THIG PROTEIN	ESCHERICHIA COLI	138-165								
PTHC_SULAC	THERMOPHILIC PRECURSOR	SULFOLOBUS ACIDOCALDARIUS	135-172	199-233							
PTHC_BRELA	THREONINE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	288-315								
PTHTR_SACER	PUTATIVE THIOLYASE SULFURTRANSFERASE	SACCHAROPOLYSPORA ERYTHRAEA	69-96								
PTIG_ECOLI	TRIGGER FACTOR	ESCHERICHIA COLI	144-171								
PTNPA_TREPA	TREPONEMAL MEMBRANE PROTEIN A PRECURSOR	TREPONEMA PALLIDUM	236-266	322-349							
PTNBP_TREPA	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PALLIDUM	44-71	111-138							
PTNBP_TREPH	TREPONEMAL MEMBRANE PROTEIN B PRECURSOR	TREPONEMA PHAGEDENIS	41-68								
PTNAB_ECOLI	LOW AFFINITY TRYPTOPHAN PERMEASE	ESCHERICHIA COLI	74-108								
PTNPA_STAAU	TRANSPPOSASE	STAPHYLOCOCCUS AUREUS	52-79								
PTNPT_ENTFA	TRANSPPOSON TN917 RESOLVASE	ENTEROCOCCUS FAECALIS	59-97								
PTNPA_STAAU	TRANSPPOSASE A	STAPHYLOCOCCUS AUREUS	151-178								
PTNBP_STAAU	TRANSPPOSASE B	STAPHYLOCOCCUS AUREUS	589-603								
PTNPI_BACTU	TNP1 RESOLVASE	BACILLUS THURINGIENSIS	7-62	174-201							
PTNSB_ECOLI	TRANSPPOSON TN7 TRANSDUCTION PROTEIN TN5B	ESCHERICHIA COLI	99-126	510-537							
PTNSC_ECOLI	TRANSPPOSON TN7 TRANSDUCTION PROTEIN TN5C	ESCHERICHIA COLI	32-59	314-341							
PTNSD_ECOLI	TRANSPPOSON TN7 TRANSDUCTION PROTEIN TN5D	ESCHERICHIA COLI	339-366								
PTNSE_ECOLI	TRANSPPOSON TN7 TRANSDUCTION PROTEIN TN5E	ESCHERICHIA COLI	463-490								
PTODI_PSEPU	TOLUENE 1,2-DIOXYGENASE ALPHA SUBUNIT	PSEUDOMONAS PUTIDA	36-63								
PTOD2_PSEPU	TOLUENE 1,2-DIOXYGENASE BETA SUBUNIT	PSEUDOMONAS PUTIDA	119-153								
PTODA_PSEPU	TOLUENE 1,2-DIOXYGENASE SYSTEM	PSEUDOMONAS PUTIDA	179-213								
PTODI_PSEPU	TODF PRODUCT HYDRATASE	PSEUDOMONAS PUTIDA	143-170								
PTOLA_ECOLI	TOLA PROTEIN	ESCHERICHIA COLI	101-138								
PTOLC_ECOLI	OUTER MEMBRANE PROTEIN TOLC PRECURSOR	ESCHERICHIA COLI	144-178	184-211	239-266	348-375					
PTOP1_SYNP7	DNA TOPOISOMERASE I	SYNECHOCOCCUS SP	203-230								
PTORA_ECOLI	TRIMETHYLAMINE-N-OXIDE REDUCTASE	ESCHERICHIA COLI	797-824								
PTOX1_BORPE	PERTUSSIS TOXIN SUBUNIT 1 (S1) PRECURSOR	BORDETELLA PERTUSSIS	179-206								
PTOX2_BORPE	PERTUSSIS TOXIN SUBUNIT 2 (S2) PRECURSOR	BORDETELLA PERTUSSIS	58-85								
PTOXA_CLODI	TOXIN A	CLOSTRIDIUM DIFFICILE	20-48	99-159	204-231	342-369	373-414	847-962	966-994	997-1024	1348-1402
PTOXA_PSEAE	EXOTOXIN A PRECURSOR	PSEUDOMONAS AERUGINOSA	470-497								
PTOXB_CLODI	TOXIN B	CLOSTRIDIUM DIFFICILE	38-72	133-163	199-241	825-869	923-950	1334-1388	1403-1433	1506-1565	1716-1747
PTOX3_VIBCH	TRANSMEMBRANE REGULATORY PROTEIN TOXS	VIBRIO CHOLERAE	13-40								
PTPF1_TREPA	ANTIGEN TPF1	TREPONEMA PALLIDUM	106-143								
PTPIS_ECOLI	TRIOSEPHOSPHATE ISOMERASE	ESCHERICHIA COLI	83-110								
PTPIS_MOKSP	TRIOSEPHOSPHATE ISOMERASE	MORAXELLA SP	139-166								
PTPR_PORGI	THIOL PROTEIN PRECURSOR	PORPHYROMONAS GINGIVALIS	117-144								
PTRM_AGR73	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTRM_AGR74	TRYPTOPHAN 2-MONOOXYGENASE	AGROBACTERIUM TUMEFACIENS	239-266	501-529							
PTRM_PSESS	TRYPTOPHAN 2-MONOOXYGENASE	PSEUDOMONAS SYRINGAE	41-68								
PTRA1_STAAU	TRANSPPOSASE	STAPHYLOCOCCUS AUREUS	58-113								
PTRA2_STAAU	TRANSPPOSASE	STAPHYLOCOCCUS AUREUS	11-38	58-113							
PTRA3_ECOLI	TRANSPPOSASE	ESCHERICHIA COLI	721-755								
PTRA3_RHIME	TRANSPPOSASE	RHIZOBIUM MELILOTI	179-206								
PTRA3_STAAU	TRANSPPOSASE	STAPHYLOCOCCUS AUREUS	33-60	68-95							
PTRA4_ECOLI	TRANSPPOSASE	ESCHERICHIA COLI	181-208	308-340	720-754						
PTRA6_ECOLI	TRANSPPOSASE	ESCHERICHIA COLI	51-78								
PTRA6_SHEBO	TRANSPPOSASE	SHIGELLA SONNEI	51-78	200-227	231-258						
PTRA7_ECOLI	TRANSPPOSASE	ESCHERICHIA COLI	729-756								
PTRA9_MYETU	PUTATIVE TRANSPPOSASE	MYCOBACTERIUM TUBERCULOSIS	159-186								
PTRAB_BACTB	IS231B PROBABLE TRANSPPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_BACTB	IS231C PROBABLE TRANSPPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRAC_STAAU	TRANSPPOSASE	STAPHYLOCOCCUS AUREUS	4-31	45-72							
PTRAX_BACTB	IS231 PROBABLE TRANSPPOSASE	BACILLUS THURINGIENSIS	281-308	419-446							
PTRA_BACTU	TRANSPPOSASE	BACILLUS THURINGIENSIS	93-127	509-539							

PGCENE	10717844	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PTA_PSEAE	TRANSPOSASE	PSEUDOMONAS AERUGINOSA	127-154	721-755							
PTB1_ECOLI	TRAB PROTEIN	ESCHERICHIA COLI	113-143								
PTB2_ECOLI	TRDF PROTEIN	ESCHERICHIA COLI	12-39								
PTB3_ECOLI	TRB1 PROTEIN	ESCHERICHIA COLI	70-97								
PTC1_ECOLI	TRAC-1 PROTEIN	ESCHERICHIA COLI	1006-1038								
PTC2_ECOLI	TRAC-2 PROTEIN	ESCHERICHIA COLI	1102-1149								
PTC3_ECOLI	TRAC-3 PROTEIN	ESCHERICHIA COLI	884-931								
PTD1_ECOLI	TRAD PROTEIN	ESCHERICHIA COLI	297-348								
PTD2_ECOLI	PERIPLASMIC TRIALALASE PRECURSOR	ESCHERICHIA COLI	362-403	477-508							
PTD3_ECOLI	ANYLOTREHALASE	ESCHERICHIA COLI	280-307								
PTD4_ECOLI	TRFA TRANSCRIPTIONAL REPRESSOR PROTEIN	ESCHERICHIA COLI	5-32	105-132							
PTG1_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	61-88	630-657	831-858	865-895					
PTG2_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	196-223								
PTG3_ECOLI	TRAG PROTEIN	ESCHERICHIA COLI	195-222	518-545							
PTG4_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	155-209	597-624	887-914	1350-1377					
PTG5_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	155-209	597-624	887-914	1350-1377					
PTG6_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	47-74	328-371							
PTG7_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	36-63								
PTG8_ECOLI	TRAI PROTEIN	ESCHERICHIA COLI	5-32								
PTM1_ECOLI	TRNA (URACIL-5-METHYL) TRANSFERASE	ESCHERICHIA COLI	107-137								
PTM2_ECOLI	TRNA (GUANINE-N1-METHYL) TRANSFERASE	ESCHERICHIA COLI	113-142	226-253							
PTM3_ECOLI	TRYPHOPHAN SYNTHASE ALPHA CHAIN	BACILLUS SUBTILIS	220-247								
PTM4_ECOLI	TRYPHOPHAN SYNTHASE ALPHA CHAIN	CAULOBACTER CRESCENTUS	241-275								
PTM5_ECOLI	TRYPHOPHAN SYNTHASE ALPHA CHAIN	PSEUDOMONAS AERUGINOSA	176-203								
PTM6_ECOLI	TRYPHOPHAN SYNTHASE BETA CHAIN	ACINETOBACTER CALCOACETICUS	79-113								
PTM7_ECOLI	TRYPHOPHAN SYNTHASE BETA CHAIN	BACILLUS SUBTILIS	76-103	318-345							
PTM8_ECOLI	TRYPHOPHAN SYNTHASE BETA CHAIN	BREVIBACTERIUM LACTOFERMENTUM	172-199								
PTM9_ECOLI	TRYPHOPHAN SYNTHASE BETA CHAIN	LACTOBACILLUS CASEI	83-117								
PTM10_ECOLI	TRYPHOPHAN SYNTHASE BETA CHAIN	LACTOCOCCUS LACTIS	77-104	164-191							
PTM11_ECOLI	TRYPHOPHAN SYNTHASE BETA CHAIN	VIBRIO PARAHAEVOLYTICUS	56-83								
PTM12_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	BREVIBACTERIUM LACTOFERMENTUM	229-256								
PTM13_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	ESCHERICHIA COLI	205-232								
PTM14_ECOLI	INDOLE-3-GLYCEROL PHOSPHATE SYNTHASE	LACTOCOCCUS LACTIS	148-175								
PTM15_ECOLI	ANTHRANILATE PHOSPHORIBOSYL TRANSFERASE	VIBRIO PARAHAEVOLYTICUS	346-376	260-294							
PTM16_ECOLI	ANTHRANILATE PHOSPHORIBOSYL TRANSFERASE	ACINETOBACTER CALCOACETICUS	223-250								
PTM17_ECOLI	ANTHRANILATE PHOSPHORIBOSYL TRANSFERASE	PSEUDOMONAS AERUGINOSA	205-232								
PTM18_ECOLI	ANTHRANILATE PHOSPHORIBOSYL TRANSFERASE	PSEUDOMONAS PUTIDA	205-232								
PTM19_ECOLI	ANTHRANILATE PHOSPHORIBOSYL TRANSFERASE	VIBRIO PARAHAEVOLYTICUS	2-29								
PTM20_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	BACILLUS PUMILUS	33-60								
PTM21_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	CLOSTRIDIUM THERMOCELLUM	165-226								
PTM22_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	LACTOCOCCUS LACTIS	142-191								
PTM23_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	LEPTOSPIRA BIFLEXA	145-179								
PTM24_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	RHIZOBIUM MELILOTI	139-166								
PTM25_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	SALMONELLA TYPHIMURUM	191-218								
PTM26_ECOLI	ANTHRANILATE SYNTHASE COMPONENT I	SULFOLOBUS SOLFATARICUS	143-183	208-228							
PTM27_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	VIBRIO PARAHAEVOLYTICUS	9-36	54-81							
PTM28_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	ACINETOBACTER CALCOACETICUS	12-39								
PTM29_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	AZOSPILLUM BRASILENSE	4-31								
PTM30_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	ESCHERICHIA COLI	5-32								
PTM31_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	LACTOCOCCUS LACTIS	4-31								
PTM32_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	PSEUDOMONAS AERUGINOSA	12-39								
PTM33_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	SALMONELLA TYPHIMURUM	5-32								
PTM34_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	SERRA TIA MARCESCENS	9-43								
PTM35_ECOLI	ANTHRANILATE SYNTHASE COMPONENT II	SHIGELLA DYSENTERIAE	5-32								
PTM36_ECOLI	PUTATIVE TRANSCRIPTIONAL REGULATOR	PSEUDOMONAS AERUGINOSA	147-174								
PTM37_ECOLI	TRAS PROTEIN	ESCHERICHIA COLI	85-119								
PTM38_ECOLI	RESISTANCE PROTEIN PRECURSOR	ESCHERICHIA COLI	184-221								

PCGENE	10717844	Prokaryotic Sequences															
FILE NAME	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9						
PTRY1_SALTY	TRAY PROTEIN	SALMONELLA TYPHIMURIUM	30-57														
PTRY2_STRGR	TRYPSIN PRECURSOR	STREPTOMYCES GRISEUS	80-107														
PTSR_STRAZ	RNA METHYLTRANSFERASE	STREPTOMYCES AZUREUS	126-153														
PTSS1_STAAU	TOXIC SHOCK SYNDROME TOXIN-1 PRECURSOR	STAPHYLOCOCCUS AUREUS	29-63	102-129													
PTSX_ECOLI	CHANNEL-FORMING PROTEIN TSX PRECURSOR	ESCHERICHIA COLI	225-232														
PTTK_ECOLI	HYPOTHETICAL 24.3 KD PROTEIN	ESCHERICHIA COLI	81-115														
PTUS_ECOLI	SITE-BINDING PROTEIN	ESCHERICHIA COLI	57-91	107-134													
PTYCA_BACBR	TYROCIDINE SYNTHETASE I	BACILLUS BREVIS	117-147	534-561	1019-1051												
PTYFI_TREPE	ANTIGEN TYFI	TREPONEMA PERTENUE	106-143														
PTYRA_BACSU	POSSIBLE PREPHENATE DEHYDROGENASE	BACILLUS SUBTILIS	244-271	312-342													
PTYRA_ECOLI	CHORISMATE MUTASE	ESCHERICHIA COLI	329-370														
PTYRR_ECOLI	TRANSCRIPTIONAL REGULATORY PROTEIN TYRR	ESCHERICHIA COLI	483-510														
PTYSY_LACCA	THYMIDYLATE SYNTHASE	LACTOBACILLUS CASEI	139-173														
PTYST_LACLA	THYMIDYLATE SYNTHASE	LACTOCOCCUS LACTIS	75-109														
PTYSY_STAAU	THYMIDYLATE SYNTHASE	STAPHYLOCOCCUS AUREUS	69-96														
PUIPB_ECOLI	SENSOR PROTEIN UHPB	ESCHERICHIA COLI	276-303	316-343													
PUIPB_SALTY	SENSOR PROTEIN UHPB	SALMONELLA TYPHIMURIUM	276-303	316-343													
PUNUC_SALTY	UNUC PROTEIN	SALMONELLA TYPHIMURIUM	204-231														
PUPP_ECOLI	URACIL PHOSPHORIBOSYLTRANSFERASE	ESCHERICHIA COLI	30-57														
PURAA_ECOLI	URACIL PERMEASE	ESCHERICHIA COLI	350-384														
PUREJ_HELPY	UREASE ALPHA SUBUNIT	HELI COBACTER PYLORI	15-42														
PUREI_PROMI	UREASE ALPHA SUBUNIT	PROTEUS MIRABILIS	72-99														
PUREI_PROVU	UREASE ALPHA SUBUNIT	PROTEUS VULGARIS	72-99														
PUREI_UREUR	UREASE ALPHA SUBUNIT	UREAPLASMA UREALYTICUM	13-40	483-517													
PURE2_HELPY	UREASE BETA SUBUNIT	HELI COBACTER PYLORI	62-99														
PURED_HELPY	UREASE OPERON URED PROTEIN	HELI COBACTER PYLORI	17-44														
PUREE_PROMI	UREASE ACCESSORY PROTEIN UREE	PROTEUS MIRABILIS	57-84														
PUREF_KLEAE	UREASE ACCESSORY PROTEIN UREF PRECURSOR	KLEBSIELLA AEROGES	20-47														
PUS4_LACLA	SECRETED 43 KD PROTEIN PRECURSOR	LACTOCOCCUS LACTIS	44-98	150-223	276-303												
PUSHA_ECOLI	P-SUGAR HYDROLASE PRECURSOR	ESCHERICHIA COLI	56-83														
PUSHA_SALTY	SILENT PROTEIN USHA(0) PRECURSOR	SALMONELLA TYPHIMURIUM	56-83														
PUVRA_ECOLI	EXCINUCLEASE ABC SUBUNIT A	ESCHERICHIA COLI	527-554	871-898													
PUVRA_MICLI	EXCINUCLEASE ABC SUBUNIT A	MICROCOCUS LUTEUS	579-606	619-646	684-718	922-949											
PUVRA_PARDE	EXCINUCLEASE ABC SUBUNIT A	PARACOCUS DENITRIFICANS	33-60														
PUVRC_BACSU	EXCINUCLEASE ABC SUBUNIT C	BACILLUS SUBTILIS	342-372	511-538													
PUVRC_ECOLI	EXCINUCLEASE ABC SUBUNIT C	ESCHERICHIA COLI	37-64	332-362													
PVURD_ECOLI	HELICASE II	ESCHERICHIA COLI	280-307														
PVANA_ENTFC	VANCOMYCIN RESISTANCE PROTEIN VANA	ENTEROCOCCUS FAECIUM	182-209														
PVANC_ENTGA	VANCOMYCIN RESISTANCE PROTEIN VANC	ENTEROCOCCUS GALLINARUM	177-211														
PVIB4_AGR15	VIRB4 PROTEIN PRECURSOR	AGROBACTERIUM TUMEFACIENS	138-172														
PVIB6_AGR15	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227														
PVIB6_AGR16	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227														
PVIB6_AGR19	VIRB6 PROTEIN	AGROBACTERIUM TUMEFACIENS	190-227														
PVIBX_AGR15	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239													
PVIBX_AGR16	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	211-238													
PVIBX_AGR19	VIRB10 PROTEIN	AGROBACTERIUM TUMEFACIENS	32-59	212-239													
PVICI_AGR15	VIRCI PROTEIN	AGROBACTERIUM RHIZOGONES TUMEFACIENS	81-108														
PVICI_AGR16	VIRCI PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108														
PVICI_AGR19	VIRCI PROTEIN	AGROBACTERIUM TUMEFACIENS	81-108														
PVIDJ_AGR15	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM RHIZOGONES	149-176	265-292													
PVIDJ_AGR16	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-76	113-147	657-684												
PVIDJ_AGR19	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR16	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR19	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR16	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR19	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR16	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR19	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR16	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
PVIDJ_AGR19	WIDE HOST RANGE (WHR) VIRB4 PROTEIN	AGROBACTERIUM TUMEFACIENS	42-69	84-125	653-680												
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PCGENE	10717814	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
BUENANIE	PROTEIN	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVISC_ECOLI	VISC PROTEIN	ESCHERICHIA COLI	47-74								
PVLP4_MYGRH	VARIANT SURFACE ANTIGEN A PRECURSOR	MYCOPLASMA HYORHINIS	74-112								
PVNM03_BORHE	OUTER MEMBRANE LIPOPROTEIN 3 PRECURSOR	BORRELIA HERMSII	34-81								
PVNM07_BORHE	OUTER MEMBRANE LIPOPROTEIN 7 PRECURSOR	BORRELIA HERMSII	332-359								
PVNM21_BORHE	OUTER MEMBRANE LIPOPROTEIN 21 PRECURSOR	BORRELIA HERMSII	330-357								
PVNM24_BORHE	OUTER MEMBRANE LIPOPROTEIN 24 PRECURSOR	BORRELIA HERMSII	47-143								
PVNM25_BORHE	OUTER MEMBRANE LIPOPROTEIN 25 PRECURSOR	BORRELIA HERMSII	315-356								
PVNFA_AZOV1	NITROGEN FIXATION PROTEIN VNFA	AZOTOBACTER VINELANDII	158-188	218-245							
PVNFK_AZOVH	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER CHROCOCCUM MCD 1	68-95								
PVNFK_AZOV1	NITROGENASE VANADIUM-IRON PROTEIN	AZOTOBACTER VINELANDII	68-95	372-403							
PVNP2_SALCH	63 KD VIRULENCE PROTEIN	SALMONELLA CHOLERAE-SUIS	509-536								
PVNP2_SALDU	63 KD VIRULENCE PROTEIN	SALMONELLA DUBLIN	511-538								
PVSD2_SALDU	VIRULENCE PROTEIN VSDE	SALMONELLA DUBLIN	3-36								
PVYHB_VIBVU	CYTOLYSIN SECRETION PROTEIN	VIBRIO VULNIFICUS	30-75								
PWAPA_STRUMJ	WALL-ASSOCIATED PROTEIN PRECURSOR	STREPTOCOCCUS MUTANS	4-41	313-386							
PWRBA_ECOLI	TRP REPRESSOR BINDING PROTEIN	ESCHERICHIA COLI	89-116								
PXI91_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PXI92_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PXI93_ECOLI	X POLYPEPTIDE	ESCHERICHIA COLI	104-131								
PXISA_ANASP	EXCISEASE A	ANABAENA SP	4-31	89-116	135-162						
PXPBB_ECOLI	POSSIBLE INTEGRASE/RECOMBINASE XPRB	ESCHERICHIA COLI	268-295								
PXYLA_STAXY	XYLOSE ISOMERASE	STAPHYLOCOCCUS XYLOSUS	411-438								
PXYLK_KLEAE	XYLOSE KINASE	KLEBSIELLA AEROGES	2-29								
PXYLK_LACPE	XYLOSE KINASE	LACTOBACILLUS PENTOSUS	32-79	211-238	260-287						
PXYLK_STAXY	XYLOSE KINASE	STAPHYLOCOCCUS XYLOSUS	4-31	96-130	209-236	246-273					
PXYLR_BACSU	XYLOSE REPRESSOR	BACILLUS SUBTILIS	75-102	260-287							
PXYLR_LACPE	XYLOSE REPRESSOR	LACTOBACILLUS PENTOSUS	262-289								
PXYLR_STAXY	XYLOSE REPRESSOR	STAPHYLOCOCCUS XYLOSUS	20-64	101-158	181-215	221-255	274-301				
PXYLZ_PSEPU	ELECTRON TRANSFER COMPONENT	PSEUDOMONAS PUTIDA	51-78	104-131							
PXYNA_CALSA	PUTATIVE ENDO-1,4-BETA-XYLANASE	CALDOCELLUM SACCHAROLYTICUM	198-225								
PXYNA_BACCI	O-1,4-BETA-XYLANASE PRECURSOR	BACILLUS CIRCULANS	47-74								
PXYNA_BACSU	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SUBTILIS	173-200								
PXYNA_BACSU	ENDO-1,4-BETA-XYLANASE PRECURSOR	BACILLUS SUBTILIS	47-74								
PXYNA_CALSA	ENDO-1,4-BETA-XYLANASE A PRECURSOR	CALDOCELLUM SACCHAROLYTICUM	132-159	226-256							
PXYNA_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	33-82								
PXYNB_BACPU	BETA-XYLOSIDASE	BACILLUS PUMILUS	459-486								
PXYNB_CALSA	BETA-XYLOSIDASE	CALDOCELLUM SACCHAROLYTICUM	440-474								
PXYNB_PSEFL	ENDO-1,4-BETA-XYLANASE PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	231-278	317-344	475-502					
PXYNC_PSEFL	ALPHA-L-ARABINOFURANOSIDASE C PRECURSOR	PSEUDOMONAS FLUORESCENS	51-78	231-278							
PXYNC_STRLI	ENDO-1,4-BETA-XYLANASE C PRECURSOR	STREPTOMYCES LIVIDANS	183-210								
PY1AK_HALMO	HYPOTHETICAL 14.9 KD PROTEIN	HALOCOCCUS MORRHUAE	56-83								
PY23K_STORR	HYPOTHETICAL 23.1 KD PROTEIN	STREPTOCOCCUS ORALIS	78-105								
PY36K_METSM	HYPOTHETICAL 36.7 KD PROTEIN	METHANOBREVIBACTER SMITHII	128-162	172-218							
PYAAC_ECOLI	HYPOTHETICAL 34.6 KD PROTEIN	ESCHERICHIA COLI	271-298								
PYAAM_ECOLI	HYPOTHETICAL 39.1 KD PROTEIN	PSEUDOMONAS FLUORESCENS	274-301								
PYAAQ_ECOLI	HYPOTHETICAL 59.1 KD PROTEIN	ESCHERICHIA COLI	45-72								
PYAAQ_ECOLI	HYPOTHETICAL 36.6 KD PROTEIN	ESCHERICHIA COLI	352-379								
PYABC_ECOLI	HYPOTHETICAL 28.5 KD PROTEIN	ESCHERICHIA COLI	155-182								
PYABG_ECOLI	HYPOTHETICAL 34.9 KD PROTEIN	ESCHERICHIA COLI	131-158								
PYABN_ECOLI	HYPOTHETICAL 89.7 KD PROTEIN	ESCHERICHIA COLI	446-480	627-654							
PYACI_PSEAE	HYPOTHETICAL 63.9 KD PROTEIN	ESCHERICHIA COLI	428-455								
PYAD1_CLOAB	HYPOTHETICAL 21.6 KD PROTEIN	PSEUDOMONAS AERUGINOSA	48-75	150-177							
PYAD5_CLOAB	HYPOTHETICAL 36.9 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	75-109	114-144							
PYADA_YEREN	HYPOTHETICAL 36.9 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	132-159	165-196	210-237						
PYADA_YEREN	INVASIN PRECURSOR	YERSINIA ENTEROCOLITICA	21-55								
PYADA_YERPS	INVASIN PRECURSOR	YERSINIA PSEUDOTUBERCULOSIS	196-230	247-274	318-381						
			255-282	297-360							

PCGENE	10711784	Prokaryotic Sequences	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
FILENAME	PROTEIN	ORGANISM	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7	AREA.8	AREA.9
PYADC_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	17-40	101-131							
PYAEA_RICRI	17 KD PROTEIN	RICKETTSIA RICKETTSII	107-134								
PYAIB_ECOLI	HYPOTHETICAL 29.4 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYAFD_ECOLI	HYPOTHETICAL 29.1 KD PROTEIN	ESCHERICHIA COLI	34-71								
PYAFB_ECOLI	HYPOTHETICAL 23.0 KD PROTEIN	ESCHERICHIA COLI	123-150								
PYAIB_ESCFE	HYPOTHETICAL PROTEIN	ESCHERICHIA FERGUSONII	2-35								
PYAMI_SALTY	PUTATIVE AMIDASE	SALMONELLA TYPHIMURIUM	73-100								
PYATI_SYNY3	HYPOTHETICAL 13.0 KD PROTEIN	SYNECHOCYSTIS SP	26-60								
PYATP_MYLEC	HYPOTHETICAL PUTATIVE ATP OPERON	MYCOBACTERIUM LEPTAE	23-57	91-158	511-538						
PYATR_BACFI	HYPOL ATP-BINDING TRANSPORT PROTEIN	BACILLUS FIRMS	211-238								
PYATS_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	7-41								
PYATU_MYCGA	HYPOTHETICAL PROTEIN	MYCOPLASMA GALLISEPTICUM	29-56	60-87							
PYAV3_XANGV	HYPOTHETICAL 30 KD AVIRULENCE PROTEIN	XANTHOMONAS CAMPESTRIS	68-98	199-226							
PYBAH_ECOLI	HYPOTHETICAL 24.8 KD PROTEIN	ESCHERICHIA COLI	40-79								
PYBBA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	6-69								
PYBED_ECOLI	HYPOTHETICAL 9.8 KD PROTEIN	ESCHERICHIA COLI	51-82								
PYBID_ECOLI	HYPOTHETICAL 14.1 KD PROTEIN	ESCHERICHIA COLI	97-124								
PYCAE_ECOLI	HYPOTHETICAL 24.5 KD PROTEIN	ESCHERICHIA COLI	34-61								
PYCB4_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	38-65								
PYCBL_BACUN	HYPOTHETICAL 17.3 KD PROTEIN	BACTEROIDES UNIFORMIS	66-100								
PYCEA_BACLA	HYPOTHETICAL PROTEIN	BACILLUS LAUTUS	111-138								
PYCFC_ECOLI	HYPOTHETICAL 22.9 KD PROTEIN	ESCHERICHIA COLI	52-79								
PYCHR_ALCEU	HYPOTHETICAL PROTEIN	ALCALIGENES EUTROPHUS	21-48								
PYCIB_ECOLI	HYPOTHETICAL 20.8 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYCIF_ECOLI	18.6 KD PROTEIN	ESCHERICHIA COLI	7-68	134-166							
PYCIK_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	35-62								
PYCLI_ECOLI	HYPOTHETICAL 43.3 KD PROTEIN	ESCHERICHIA COLI	54-81								
PYCP1_SYNPY	HYPOTHETICAL 29.1 KD PROTEIN	SYNECHOCOCUS SP	194-221								
PYCP3_SYNY3	HYPOTHETICAL 28.0 KD PROTEIN	SYNECHOCYSTIS SP	7-34	120-154							
PYCP5_SYNY3	HYPOTHETICAL 39.5 KD PROTEIN	SYNECHOCYSTIS SP	277-308								
PYCP6_MASLA	HYPOTHETICAL PROTEIN	MASTIGOCALDUS LAMINOSUS	2-29								
PYCPY_PSAV	HYPOTHETICAL PHYCOCYANIN OPERON PROTEIN	PSEUDONABAENA SP	380-407								
PYCR2_BACTK	HYPOTHETICAL 29.1 KD PROTEIN	BACILLUS THURINGIENSIS	42-74	153-180							
PYCS1_ECOLI	HYPOTHETICAL PROTEIN PRECURSOR	ESCHERICHIA COLI	32-59								
PYCW3_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	3-30	59-86							
PYDMM_HERAU	HYPOTHETICAL 68.4 KD PROTEIN	HERPETOSIPHON AURANTIACUS	12-39	151-178	360-416						
PYDBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	32-66	117-144	163-216	233-267	295-329	438-485	676-717	1136-1163	1499-1530
PYDDB_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	80-107								
PYDDC_ECOLI	HYPOTHETICAL 86.7 KD PROTEIN	ESCHERICHIA COLI	606-641	683-714	726-753						
PYDDO_ECOLI	HYPOTHETICAL 80.8 KD PROTEIN	ESCHERICHIA COLI	373-400	421-452	621-648						
PYDEH_ECOLI	HYPOTHETICAL 24.1 KD PROTEIN	ESCHERICHIA COLI	133-174								
PYDEJ_ECOLI	HYPOTHETICAL 18.3 KD PROTEIN	ESCHERICHIA COLI	96-130								
PYDEK_ECOLI	HYPOTHETICAL 65.5 KD PROTEIN	ESCHERICHIA COLI	4-38								
PYDNN_BORBU	HYPOTHETICAL 11.2 KD PROTEIN	BORRELIA BURGDORFERI	333-360	524-551	565-592						
PYDOI_SULSO	HYPOTHETICAL 14.7 KD PROTEIN	SULFOLOBUS SOLFATARICUS	6-36								
PYDOI_SULSO	HYPOTHETICAL 16.9 KD PROTEIN	SULFOLOBUS SOLFATARICUS	17-58	71-103							
PYEBA_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	93-120								
PYEBG_ECOLI	HYPOTHETICAL 10.7 KD PROTEIN	ESCHERICHIA COLI	50-77								
PYEEF_ECOLI	HYPOTHETICAL 18.1 KD PROTEIN	ESCHERICHIA COLI	43-70								
PYEEF_ECOLI	HYPOTHETICAL 49.8 KD TRANSPORT PROTEIN	ESCHERICHIA COLI	147-174								
PYEGA_ECOLI	HYPOTHETICAL IN DCD 3'REGION	ESCHERICHIA COLI	145-172								
PYEHA_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN	ESCHERICHIA COLI	69-106	283-310							
PYEHB_ECOLI	HYPOTHETICAL 92.3 KD PROTEIN	ESCHERICHIA COLI	151-178	501-545							
PYEHD_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN	ESCHERICHIA COLI	96-123								
PYEIF_ECOLI	HYPOTHETICAL 141.0 KD PROTEIN	ESCHERICHIA COLI	543-570								
PYEHI_ECOLI	HYPOTHETICAL 138.1 KD PROTEIN	ESCHERICHIA COLI	35-70	102-129							

PCGENE	10741784	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PYEHU_ECOLI	HYPOTHETICAL 62.1 KD PROTEIN	ESCHERICHIA COLI	376-353								
PYEIC_ECOLI	HYPOTHETICAL 33.6 KD PROTEIN	ESCHERICHIA COLI	46-80								
PYEIF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	61-88								
PYEIJ_ECOLI	HYPOTHETICAL 43.4 KD PROTEIN	ESCHERICHIA COLI	115-42								
PYELA_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	83-110								
PYEIF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	453-480								
PYEHJ_ECOLI	HYPOTHETICAL 91.2 KD PROTEIN	ESCHERICHIA COLI	399-433								
PYEHJ_ECOLI	HYPOTHETICAL 40.6 KD PROTEIN	ESCHERICHIA COLI	175-202								
PYFJ2_BACST	HYPOTHETICAL 30.6 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	131-160								
PYFXX_BRAJA	HYPOTHETICAL PROTEIN	BRADYRHIZOBIUM JAPONICUM	109-150								
PYGAP_BACME	HYPOTHETICAL 37.7 KD PROTEIN	BACILLUS MEGATERIUM	40-67								
PYGRD_ECOLI	HYPOTHETICAL 29.4 KD PROTEIN	ESCHERICHIA COLI	214-241								
PYGGH_ECOLI	HYPOTHETICAL 30.9 KD PROTEIN	ESCHERICHIA COLI	225-232								
PYGGG_ECOLI	HYPOTHETICAL 31.8 KD PROTEIN	ESCHERICHIA COLI	209-236								
PYGJ2_BACTU	HYPOTHETICAL 22.8 KD PROTEIN	BACILLUS THURINGIENSIS	26-61								
PYGJ2_PSEU	HYPOTHETICAL 32.4 KD PROTEIN	PSEUDOMONAS PUTIDA	145-172								
PYGFJ_ECOLI	HYPOTHETICAL 48.4 KD PROTEIN	ESCHERICHIA COLI	223-264								
PYGL4_BACST	HYPOTHETICAL 35.3 KD PROTEIN	BACILLUS STEAROTHERMOPHILUS	6-33								
PYGL3_BACST	HYPOTHETICAL PROTEIN	BACILLUS STEAROTHERMOPHILUS	182-209								
PYGLN_BACCE	HYPOTHETICAL 15 KD PROTEIN	BACILLUS CEREUS	79-124								
PYGRD_BACSU	HYPOTHETICAL PROTEIN	BACILLUS SUBTILIS	20-47								
PYGRB_BACSU	HYPOTHETICAL 17.1 KD PROTEIN	BACILLUS SUBTILIS	84-111								
PYGRP_BACSU	HYPOTHETICAL 39.0 KD PROTEIN	BACILLUS SUBTILIS	98-125								
PYGRP_CLOAB	HYPOTHETICAL 38.8 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	160-210								
PYGT2_STAMU	HYPOTHETICAL PROTEIN 2	STREPTOCOCCUS MUTANS	4-40	110-138	235-262						
PYHAB_ECOLI	HYPOTHETICAL 20.6 KD PROTEIN	ESCHERICHIA COLI	20-66								
PYHAC_ECOLI	HYPOTHETICAL 45.2 KD PROTEIN	ESCHERICHIA COLI	69-96								
PYHAF_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	44-71	138-165							
PYHBB_ECOLI	PROBABLE ABC TRANSPORTER	ESCHERICHIA COLI	176-203								
PYHBB_PSEU	PROBABLE ABC TRANSPORTER	PSEUDOMONAS PUTIDA	74-101	106-133	147-174						
PYHBB_THIFE	PROBABLE ABC TRANSPORTER	THIOBACILLUS FERROOXIDANS	113-140								
PYHDF_ECOLI	HYPOTHETICAL 53.4 KD PROTEIN	ESCHERICHIA COLI	267-297								
PYHEM_BACSU	HYPOTHETICAL 32.0 KD PROTEIN	BACILLUS SUBTILIS	222-253								
PYHET_ANAP	HYPOTHETICAL PROTEIN	ANABAENA SP	72-99								
PYHHA_ECOLI	HYPOTHETICAL 16.6 KD PROTEIN	ESCHERICHIA COLI	56-84								
PYHIG_ECOLI	HYPOTHETICAL 15.1 KD PROTEIN	ESCHERICHIA COLI	43-77								
PYHHH_ECOLI	HYPOTHETICAL 14.5 KD PROTEIN	ESCHERICHIA COLI	43-73								
PYHIJ_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	167-194								
PYHIJ_LACLA	HYPOTHETICAL 38.0 KD PROTEIN	LACTOCOCCUS LACTIS	90-124	132-159							
PYHIG_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	92-148								
PYHIG_LACLA	HYPOTHETICAL 30.7 KD PROTEIN	LACTOCOCCUS LACTIS	77-104	156-183							
PYHIG_LACLA	HYPOTHETICAL PROTEIN	STAPHYLOCOCCUS AUREUS	18-67								
PYHIG_VIBCH	HYPOTHETICAL 19.3 KD PROTEIN	VIBRIO CHOLERAE	99-126								
PYHMF_METFE	HYPOTHETICAL 32.2 KD PROTEIN	METHANOTHERMUS FERVIDUS	106-133								
PYHSH_CLOAB	HYPOTHETICAL 11.0 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	41-85								
PYHSA_CLOAB	HYPOTHETICAL 20.6 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	98-125								
PYHSC_CLOAB	HYPOTHETICAL 42.4 KD PROTEIN	CLOSTRIDIUM ACETOBUTYLICUM	21-52	208-231	276-310						
PYHVI_LACIE	HYPOTHETICAL PROTEIN	LACTOBACILLUS HELVETICUS	91-120	127-154							
PYHVA_PSEN	HYPOTHETICAL PROTEIN	PSEUDOMONAS SP	217-266								
PYHII_HALHA	HYPOTHETICAL 38.0 KD PROTEIN	HALOBACTERIUM HALOBIVM	245-272								
PYH32_MYCBU	IS986 HYPOTHETICAL 6.6 KD PROTEIN	MYCOBACTERIUM TUBERCULOSIS	19-46								
PYH42_PSEV	HYPOTHETICAL 42.6 KD PROTEIN	PSEUDOMONAS AMYLODERMOSA	9-36								
PYH48_METM	ISM1 HYPOTHETICAL 48.3 KD PROTEIN	METHANOBREVIBACTER SMITHII	73-100	154-184	338-365						
PYH52_HALHA	HYPOTHETICAL 31 KD PROTEIN	HALOBACTERIUM HALOBIVM	86-113								
PYHBB_ECOLI	HYPOTHETICAL 34.0 KD PROTEIN	ESCHERICHIA COLI	202-239								
PYHBD_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	9-43								
PYHBF_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN	ESCHERICHIA COLI	131-158								

PCGENE	1071784	Prokaryotic Sequences	ORGANISM	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN											
PYBQ_ECOLI	HYPOTHETICAL 18.1 KD PROTEIN		ESCHERICHIA COLI	70-97								
PYCC_ECOLI	HYPOTHETICAL 31.2 KD PROTEIN		ESCHERICHIA COLI	143-170								
PYCD_ECOLI	HYPOTHETICAL 31.1 KD PROTEIN		ESCHERICHIA COLI	132-159								
PYCH_ECOLI	HYPOTHETICAL 62.3 KD PROTEIN		ESCHERICHIA COLI	408-435								
PYCI_ECOLI	HYPOTHETICAL 88.1 KD PROTEIN		ESCHERICHIA COLI	122-149								
PYCN_ECOLI	HYPOTHETICAL 18.2 KD PROTEIN		ESCHERICHIA COLI	76-103								
PYCO_ECOLI	HYPOTHETICAL 49.9 KD PROTEIN		ESCHERICHIA COLI	320-347								
PYDB_ECOLI	HYPOTHETICAL 13.8 KD PROTEIN		ESCHERICHIA COLI	34-78								
PYDE_ECOLI	HYPOTHETICAL 15.7 KD PROTEIN		ESCHERICHIA COLI	86-113	182-209	277-304						
PYDI_ECOLI	HYPOTHETICAL 62.1 KD PROTEIN		ESCHERICHIA COLI	56-83								
PYDK_ECOLI	HYPOTHETICAL 27.3 KD PROTEIN		ESCHERICHIA COLI	2-39								
PYDP_ECOLI	HYPOTHETICAL 49.2 KD PROTEIN		ESCHERICHIA COLI	63-97								
PYEA_ECOLI	HYPOTHETICAL 49.2 KD PROTEIN		ESCHERICHIA COLI	221-248								
PYEC_ECOLI	HYPOTHETICAL 60.6 KD PROTEIN		ESCHERICHIA COLI	20-58	270-297							
PYEC_ERWCH	HYPOTHETICAL PROTEIN		ERWINIA CHRYSANTHEMI	22-67								
PYED_ECOLI	HYPOTHETICAL 34.8 KD PROTEIN		ESCHERICHIA COLI	86-120								
PYEG_ECOLI	HYPOTHETICAL 46.9 KD PROTEIN		ESCHERICHIA COLI	291-327								
PYEH_ECOLI	HYPOTHETICAL 24.7 KD PROTEIN		ESCHERICHIA COLI	51-78								
PYEM_ECOLI	HYPOTHETICAL 15.0 KD PROTEIN		ESCHERICHIA COLI	73-105								
PYEO_ECOLI	HYPOTHETICAL 51.5 KD PROTEIN		ESCHERICHIA COLI	201-242	380-407							
PYFC_ECOLI	HYPOTHETICAL 39.6 KD PROTEIN		ESCHERICHIA COLI	175-202								
PYFJ_ECOLI	HYPOTHETICAL 14.0 KD PROTEIN		ESCHERICHIA COLI	51-92								
PYGM_ECOLI	HYPOTHETICAL 33.7 KD PROTEIN		ESCHERICHIA COLI	120-154								
PYGN_ECOLI	HYPOTHETICAL 54.7 KD PROTEIN		ESCHERICHIA COLI	207-234								
PYGO_ECOLI	HYPOTHETICAL 28.1 KD PROTEIN		ESCHERICHIA COLI	67-94								
PYGP_ECOLI	HYPOTHETICAL 22.3 KD PROTEIN		ESCHERICHIA COLI	173-200								
PYGT_ECOLI	HYPOTHETICAL 27.8 KD PROTEIN		ESCHERICHIA COLI	132-159								
PYHB_ECOLI	HYPOTHETICAL 21.2 KD PROTEIN		ESCHERICHIA COLI	13-40								
PYHD_ECOLI	HYPOTHETICAL 10.1 KD PROTEIN		ESCHERICHIA COLI	28-55								
PYHF_ECOLI	HYPOTHETICAL 54.1 KD PROTEIN		ESCHERICHIA COLI	272-306								
PYHI_ECOLI	HYPOTHETICAL 19.1 KD PROTEIN		ESCHERICHIA COLI	112-139								
PYHK_ECOLI	HYPOTHETICAL 65.4 KD PROTEIN		ESCHERICHIA COLI	4-31								
PYHM_ECOLI	HYPOTHETICAL 36.9 KD PROTEIN		ESCHERICHIA COLI	83-110	120-154	297-324						
PYHO_ECOLI	HYPOTHETICAL 81.8 KD PROTEIN		ESCHERICHIA COLI	612-646								
PYHP_ECOLI	HYPOTHETICAL 53.1 KD PROTEIN		ESCHERICHIA COLI	357-384								
PYHV_ECOLI	HYPOTHETICAL 31.9 KD PROTEIN		ESCHERICHIA COLI	72-99								
PYHX_ECOLI	HYPOTHETICAL 23.5 KD PROTEIN		ESCHERICHIA COLI	9-36								
PYHZ_ECOLI	HYPOTHETICAL 15.9 KD PROTEIN		ESCHERICHIA COLI	6-33								
PYIIP_ECOLI	HYPOTHETICAL 32.9 KD PROTEIN		ESCHERICHIA COLI	22-63								
PYIU_ECOLI	HYPOTHETICAL 9.6 KD PROTEIN		ESCHERICHIA COLI	28-71								
PYJC_ECOLI	HYPOTHETICAL 26.6 KD PROTEIN		ESCHERICHIA COLI	136-163								
PYJH_ECOLI	HYPOTHETICAL 78.3 KD PROTEIN		ESCHERICHIA COLI	225-263								
PYJK_ECOLI	HYPOTHETICAL 11.2 KD PROTEIN		ESCHERICHIA COLI	26-53								
PYJO_ECOLI	HYPOTHETICAL 32.1 KD PROTEIN		ESCHERICHIA COLI	214-241								
PYJP_ECOLI	HYPOTHETICAL 66.6 KD PROTEIN		ESCHERICHIA COLI	110-137	419-446							
PYJL_LISMO	HYPOTHETICAL 26.8 KD PROTEIN		LISTERIA MONOCYTOGENES	7-34								
PYIS_SHISO	INSERTION ELEMENT IS600		SHIGELLA SONNEI	62-89								
PYIS_SHISO	IS110 HYPOTHETICAL 43.6 KD PROTEIN		STREPTOMYCES COELICOLOR	125-152								
PYIS_SHISO	INSERTION ELEMENT IS629		SHIGELLA SONNEI	66-100								
PYIS_SHISO	HYPOTHETICAL 42.1 KD PROTEIN		BACILLUS SP	312-339								
PYIAG_ECOLI	HYPOTHETICAL 22.6 KD PROTEIN		ESCHERICHIA COLI	51-78								
PYIAL_ECOLI	HYPOTHETICAL 20.4 KD PROTEIN		ESCHERICHIA COLI	88-122								
PYIBH_ECOLI	HYPOTHETICAL 78.3 KD PROTEIN		ESCHERICHIA COLI	93-120								
PYIBL_ECOLI	HYPOTHETICAL 9.7 KD PROTEIN		ESCHERICHIA COLI	30-57								
PYIBM_ECOLI	HYPOTHETICAL 26.3 KD PROTEIN		ESCHERICHIA COLI	112-149								
PYIBQ_ECOLI	HYPOTHETICAL 15.7 KD PROTEIN		ESCHERICHIA COLI	2-29								
PYICC_ECOLI	HYPOTHETICAL 60.8 KD PROTEIN		ESCHERICHIA COLI	38-65	414-441	451-492						

PCGENE	107x178x4	Prokaryotic Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	ORGANISM									
PYCE_ECOLI	HYPOTHETICAL 60.5 KD PROTEIN	ESCHERICHIA COLI	454-481								
PYICQ_ECOLI	HYPOTHETICAL 59.2 KD PROTEIN	ESCHERICHIA COLI	394-421								
PYICQ_ECOLI	HYPOTHETICAL 25.1 KD PROTEIN	ESCHERICHIA COLI	91-118								
PYICP_ECOLI	HYPOTHETICAL 51.4 KD PROTEIN	ESCHERICHIA COLI	242-269								
PYICQ_ECOLI	HYPOTHETICAL 71.7 KD PROTEIN	ESCHERICHIA COLI	366-396								
PYICW_ECOLI	HYPOTHETICAL ABC TRANSPORTER	ESCHERICHIA COLI	50-84								
PYIDA_ECOLI	HYPOTHETICAL 84.2 KD PROTEIN	ESCHERICHIA COLI	2-29	451-485							
PYIDB_ECOLI	HYPOTHETICAL PROTEIN	ESCHERICHIA COLI	103-134								
PYIDA_ECOLI	HYPOTHETICAL 17.5 KD PROTEIN PRECURSOR	ESCHERICHIA COLI	35-69	88-129							
PYKAB_BACFI	HYPOTHETICAL 48.8 KD PROTEIN	BACILLUS FIRMS	321-355								
PYLAJ_LACAC	HYPOTHETICAL PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAJ_LACAC	HYPOTHETICAL 14.5 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	15-42								
PYLAJ_LACAC	HYPOTHETICAL 14.4 KD PROTEIN	LACTOBACILLUS ACIDOPHILUS	47-74								
PYLAC_SULSO	HYPOTHETICAL 24.4 KD PROTEIN	SULFOLOBUS SOLFATANUS	23-50								
PYLPI_PSEPU	HYPOTHETICAL 44.7 KD PROTEIN	PSEUDOMONAS PUTIDA	186-213	314-341							
PYLPA_YEREN	YLP A LIPOPROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	184-221								
PYLTI_ANAVA	HYPOTHETICAL 22.6 KD PROTEIN	ANABAENA VARIABILIS	172-199								
PYLUD_LACLA	HYPOTHETICAL 29.7 KD PROTEIN	LACTOCOCCUS LACTIS	35-70								
PYME2_BACSU	HYPOTHETICAL 35.3 KD PROTEIN	BACILLUS SUBTILIS	52-79								
PYMG2_MYCGE	HYPOTHETICAL 114.4 KD PROTEIN PRECURSOR	MYCOPLASMA GENITALIUM	56-83	159-193	420-445	981-1008					
PYNGA_CLOPE	HYPOTHETICAL PROTEIN	CLOSTRIDIUM PERFRINGENS	139-166								
PYNGB_CLOPE	HYPOTHETICAL 31.2 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	12-49	63-97	182-211						
PYNI1_METIL	HYPOTHETICAL PROTEIN	METHANOCOCCUS THERMOLITHOTROPHICUS	55-89								
PYNOI_PARDE	HYPOTHETICAL 9.3 KD PROTEIN	PARACOCUS DENITRIFICANS	52-86								
PYNTJ_ANASP	HYPOTHETICAL 28.1 KD PROTEIN	ANABAENA SP	171-198								
PYNT3_ANASP	HYPOTHETICAL PROTEIN	ANABAENA SP	87-165								
PYOHG_ECOLI	HYPOTHETICAL 21.4 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYOHG_ECOLI	HYPOTHETICAL 43.3 KD PROTEIN	ESCHERICHIA COLI	104-171	289-316							
PYOLA_ECOLI	HYPOTHETICAL 15.0 KD PROTEIN	ESCHERICHIA COLI	17-44								
PYOIE_ECOLI	HYPOTHETICAL 91.5 KD PROTEIN	ESCHERICHIA COLI	221-248								
PYOIF_ECOLI	HYPOTHETICAL 9.3 KD PROTEIN	ESCHERICHIA COLI	41-82								
PYOIH_ECOLI	HYPOTHETICAL 34.3 KD PROTEIN	ESCHERICHIA COLI	145-193								
PYOIJ_ECOLI	HYPOTHETICAL 36.2 KD PROTEIN	ESCHERICHIA COLI	94-121								
PYOMQ_PHOS9	HYPOTHETICAL PROTEIN IN OMPH 3 REGION	PHOTOBACTERIUM SP	32-59								
PYOPH_YEREN	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA ENTEROCOLITICA	63-105								
PYOPH_YERPS	PROTEIN-TYROSINE PHOSPHATASE YOPH	YERSINIA PSEUDOTUBERCULOSIS	63-105								
PYOPN_YERPS	OUTER MEMBRANE PROTEIN YOPN	YERSINIA ENTEROCOLITICA	23-50	66-93	215-262						
PYOPN_YERPS	OUTER MEMBRANE PROTEIN YOPN	YERSINIA PSEUDOTUBERCULOSIS	23-50	66-93	215-262						
PYOPQ_YEREN	YOPQ PROTEIN PRECURSOR	YERSINIA ENTEROCOLITICA	61-88								
PYORA_HAEIN	HYPOTHETICAL 31.5 KD PROTEIN	HAEMOPHILUS INFLUENZAE	147-174								
PYORA_LISMO	HYPOTHETICAL 25.6 KD PROTEIN	LISTERIA MONOCYTOGENES	32-77								
PYORA_PIRWO	HYPOTHETICAL 24.7 KD PROTEIN	PYROCOCUS WOESSEI	183-210								
PYORB_HAEIN	HYPOTHETICAL 19.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	39-66								
PYORC_HAEIN	HYPOTHETICAL 19.9 KD PROTEIN	HAEMOPHILUS INFLUENZAE	49-79								
PYORE_HAEIN	8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	47-74	82-109							
PYORH_HAEIN	26.8 KD PROTEIN	HAEMOPHILUS INFLUENZAE	199-229								
PYORH_HAEIN	HYPOTHETICAL 13.7 KD PROTEIN	HAEMOPHILUS INFLUENZAE	7-34								
PYORI_HAEIN	95.4 KD PROTEIN	HAEMOPHILUS INFLUENZAE	416-450	688-722							
PYORO_BACSU	HYPOTHETICAL 34 KD PROTEIN	BACILLUS SUBTILIS	148-175								
PYORX_PIRWO	HYPOTHETICAL PROTEIN	PYROCOCUS WOESSEI	66-93								
PYORZ_LISMO	HYPOTHETICAL 16.9 KD PROTEIN	LISTERIA MONOCYTOGENES	27-54								
PYPI5_STAAU	HYPOTHETICAL 15.5 KD PROTEIN	STAPHYLOCOCCUS AUREUS	71-98	110-137							
PYP23_BACFI	HYPOTHETICAL 22.5 KD PROTEIN	BACILLUS SUBTILIS	57-84								
PYP21_STAAU	HYPOTHETICAL 22.2 KD PROTEIN	STAPHYLOCOCCUS AUREUS	29-70								
PYP2A_STAAU	HYPOTHETICAL 26.9 KD PROTEIN	STAPHYLOCOCCUS AUREUS	34-104								
PYP2B_STAAU	HYPOTHETICAL 27.0 KD PROTEIN	STAPHYLOCOCCUS AUREUS	23-60	62-89	179-206						
PYP2C_STAAU	HYPOTHETICAL 27.7 KD PROTEIN	STAPHYLOCOCCUS AUREUS	13-83	129-176							

PCGENE	1071784	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PYP7_AGR14	HYPOTHETICAL PROTEIN 7	AGROBACTERIUM TUMEFACIENS	29-56								
PYP2_LEGN	HYPOTHETICAL PROTEIN	LEGIONELLA PNEUMOPHILA	94-135								
PYP5_ENTFA	HYPOTHETICAL 13 KD PROTEIN	ENTEROCOCCUS FAECALIS	79-106								
PYP1_ECOLI	HYPOTHETICAL 21.6 KD PROTEIN	BACILLUS ANTHRACIS	13-47	115-162							
PYP4_BACSU	HYPOTHETICAL 27.6 KD PROTEIN	ESCHERICHIA COLI	5-32								
PYP1_ECOLI	HYPOTHETICAL 12.6 KD PROTEIN	BACILLUS SUBTILIS	184-222								
PYP1_ECOLI	HYPOTHETICAL 18.1 KD PROTEIN	ESCHERICHIA COLI	16-43								
PYP1_SYP2	HYPOTHETICAL 19.7 KD PROTEIN	SYNECHOCOCCUS SP	34-61								
PYP16_CLOPE	HYPOTHETICAL 14.5 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	7-34	43-77	83-149						
PYP19_CLOPE	HYPOTHETICAL 14.5 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	2-59								
PYP1X_CLOPE	HYPOTHETICAL 38.4 KD PROTEIN	CLOSTRIDIUM PERFRINGENS	110-137	263-290	303-340						
PYP1Y_PSEAE	HYPOTHETICAL 38.5 KD PROTEIN	PSEUDOMONAS AERUGINOSA	22-52								
PYP8_BACSU	HYPOTHETICAL PROCESSING PROTEASE	BACILLUS SUBTILIS	329-356								
PYPQO_KLEPN	HYPOTHETICAL PROTEIN	KLEBSIELLA PNEUMONIAE	241-270								
PYP52_PLEBO	HYPOTHETICAL 13.1 KD PROTEIN	PLECTONEMA BORYANUM	27-54								
PYP11_METTF	HYPOTHETICAL 40.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYPV1_METTF	HYPOTHETICAL 22.3 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	3-30								
PYPV7_METTF	HYPOTHETICAL 17.3 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	69-117								
PYPV8_METTF	HYPOTHETICAL 49.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	333-360	389-430							
PYP18_METTF	HYPOTHETICAL 72.4 KD PROTEIN	BACILLUS SUBTILIS	602-636								
PYP21_METTF	HYPOTHETICAL 40.6 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYP22_METTF	HYPOTHETICAL 33.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	58-85	308-335							
PYP23_METTF	HYPOTHETICAL 54.1 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	193-220	226-253	381-408						
PYP27_METTF	HYPOTHETICAL 9.7 KD PROTEIN	METHANOBACTERIUM THERMOFORMICICUM	5-78								
PYP18_THEPE	HYPOTHETICAL 18.7 KD PROTEIN	THERMOPHILUM PENDENS	82-109								
PYP81_HALCU	HYPOTHETICAL 40 KD GTP-BINDING PROTEIN	HALOBACTERIUM CUTIRUBRUM	20-51								
PYP8C_SYP2	HYPOTHETICAL 28.7 KD PROTEIN	SYNECHOCOCCUS SP	49-76								
PYP80_SALTU	HYPOTHETICAL 40.6 KD PROTEIN	SALMONELLA TYPHIMURUM	143-190								
PYP2_SALTU	HYPOTHETICAL 51.0 KD PROTEIN	SALMONELLA TYPHIMURUM	428-455								
PYP5_SALTU	HYPOTHETICAL 20.6 KD PROTEIN	SALMONELLA TYPHIMURUM	29-36								
PYP8_SALTU	HYPOTHETICAL 36.6 KD PROTEIN	SALMONELLA TYPHIMURUM	130-157								
PYP2_LACLA	HYPOTHETICAL PROTEIN	LACTOCOCCUS LACTIS	140-167								
PYP11_METVA	HYPOTHETICAL PROTEIN	METHANOCOCCUS VANNIELII	40-93	129-156							
PYP2_METVA	HYPOTHETICAL 11.6 KD PROTEIN	METHANOCOCCUS VANNIELII	13-40								
PYP2_SULAC	HYPOTHETICAL 11.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	5-51								
PYP2_SULAC	HYPOTHETICAL 14.5 KD PROTEIN	SULFOLOBUS ACIDOCALDARIUS	37-71								
PYP2_BACSU	HYPOTHETICAL 23.3 KD PROTEIN	BACILLUS SUBTILIS	29-36								
PYP13_BACSU	HYPOTHETICAL 11.4 KD PROTEIN	BACILLUS SUBTILIS	3-30	44-81							
PYSCB_YEREN	HYPOTHETICAL YSC OPERON PROTEIN B	YERSINIA ENTEROCOLITICA	90-121								
PYSCD_YEREN	YSC OPERON PROTEIN C PRECURSOR	YERSINIA ENTEROCOLITICA	38-72	365-399							
PYSCD_YEREN	YSC OPERON PROTEIN D	YERSINIA ENTEROCOLITICA	242-269								
PYSCD_YEREN	YSC OPERON PROTEIN H	YERSINIA ENTEROCOLITICA	28-58								
PYSCD_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	28-58								
PYSCD_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	49-76								
PYSCD_YEREN	YSC OPERON PROTEIN I	YERSINIA ENTEROCOLITICA	49-76								
PYSCD_YEREN	YSC OPERON LIPROTEIN J PRECURSOR	YERSINIA ENTEROCOLITICA	99-126								
PYSCD_YEREN	YSC OPERON LIPROTEIN J PRECURSOR	YERSINIA ENTEROCOLITICA	99-126								
PYSCD_YEREN	YSC OPERON PROTEIN L	YERSINIA ENTEROCOLITICA	41-68								
PYSCD_YEREN	YSC OPERON PROTEIN L	YERSINIA ENTEROCOLITICA	41-68								
PYSMA_SERMA	HYPOTHETICAL 9.5 KD PROTEIN	SERRATIA MARCESCENS	11-70								
PYSO2_DESAM	HYPOTHETICAL 28.3 KD PROTEIN	DESULFUROLOBUS AMBIVALENS	68-109								
PYSO2_DESAM	HYPOTHETICAL PROTEIN	DESULFUROLOBUS AMBIVALENS	65-155								
PYSP2_LEPN	HYPOTHETICAL PROTEIN	LEPTOSPIRA INTEROGANS	6-33	60-94							
PYSR1_MYCOM	HYPOTHETICAL PROTEIN	MYCOPLASMA MYCOIDES	35-99	185-227	300-327						
PYSY3_BACSU	HYPOTHETICAL 19.6 KD PROTEIN	BACILLUS SUBTILIS	72-99								
PYSYN_METFE	HYPOTHETICAL PROTEIN	METHANOTHERMUS FERVIDUS	78-103								
PYT37_STRFR	HYPOTHETICAL 37.1 KD PROTEIN	STREPTOMYCES FRADIAE	246-273								

PCGENE	107x178x4	Prokaryotic Sequences									
FILE NAME	PROTEIN	ORGANISM									
PYTDK_BACSU	HYPOTHETICAL 35.6 KD PROTEIN	BACILLUS SUBTILIS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PYTRP_LBPBI	HYPOTHETICAL 22 KD PROTEIN	LEPTOSPIRA BIFLEXA	244-271	279-306							
PYTRP_LACLA	HYPOTHETICAL 13.3 KD PROTEIN	LACTOCOCCUS LACTIS	84-113								
PYTSI_BACSU	HYPOTHETICAL 20 KD PROTEIN	BACILLUS SUBTILIS	76-112								
PYTSF_SPCGI	HYPOTHETICAL 23.8 KD PROTEIN	SPIROPLASMA CITRI	37-64								
PYX04_BACSU	HYPOTHETICAL 12.8 KD PROTEIN	BACILLUS SUBTILIS	102-149								
PYX06_BACSU	HYPOTHETICAL 21.0 KD PROTEIN	BACILLUS SUBTILIS	37-64	68-95							
PYX13_BACSU	HYPOTHETICAL 26.0 KD PROTEIN	BACILLUS SUBTILIS	142-169								
PYX15_BACSU	HYPOTHETICAL 61.8 KD PROTEIN	BACILLUS SUBTILIS	17-51								
PYX18_BACSU	HYPOTHETICAL 66.8 KD PROTEIN	BACILLUS SUBTILIS	165-207	262-289							
PYX19_BACSU	HYPOTHETICAL 31.3 KD PROTEIN	BACILLUS SUBTILIS	3-30	34-61	94-142						
PYX20_BACSU	HYPOTHETICAL 23.2 KD PROTEIN	BACILLUS SUBTILIS	56-83	85-112							
PYX12_ANASP	HYPOTHETICAL 18.9 KD PROTEIN	ANABAENA SP	24-38								
PYXYB_CALSA	HYPOTHETICAL 10.7 KD PROTEIN	CALDOCELLUM SACCHAROLYTICUM	77-104								
PYXYC_CALSA	HYPOTHETICAL PROTEIN	CALDOCELLUM SACCHAROLYTICUM	9-39								
PYZEI_ECOLI	HYPOTHETICAL 16.7 KD PROTEIN	ESCHERICHIA COLI	41-94								
			41-78								

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TABLE IX

107 X 178 X 4 SEARCH MOTIF RESULTS SUMMARY

FOR ALL HUMAN PROTEINS

PCGENE	1071784 Motif Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PI43F_HUMAN	I4-3-3 PROTEIN ETA (PROTEIN A51) (FRAGMENT)	101-115								
PI43S_HUMAN	I4-3-3 PROTEIN HOMOLOG STRATIFIN	45-72								
PI43T_HUMAN	I4-3-3 PROTEIN THETA (I4-3-3 PROTEIN T-CELL) (H51 PROTEIN)	61-92								
PI43Z_HUMAN	I4-3-3 PROTEIN ZETA (PROTEIN KINASE C INHIBITOR PROTEIN-1) (KICP-1)	28-55								
PIA23_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-29(AW-19) A*2901 ALPHA CHAIN	87-114								
PIA24_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, A-29(AW-19) A*2902 ALPHA CHAIN	87-114								
PIB02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-7 B*0702 ALPHA CHAIN	87-114								
PIB05_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-13 B*1301 ALPHA CHAIN	87-114	148-182							
PIB10_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-75(B-15) B*1502 ALPHA CHAIN	84-115								
PIB11_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-72(BW-70) B*1503 ALPHA CHAIN	84-115								
PIB12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-62 B*1504 ALPHA CHAIN	76-107								
PIB13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-18 B*1801 ALPHA CHAIN	84-115								
PIB21_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3501 ALPHA CHAIN	84-115								
PIB22_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3502 ALPHA CHAIN	84-115								
PIB23_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3503 ALPHA CHAIN	84-115								
PIB24_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3504 ALPHA CHAIN	76-107								
PIB25_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3505 ALPHA CHAIN	84-115								
PIB26_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3506 ALPHA CHAIN	84-115								
PIB27_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3507 ALPHA CHAIN	84-115								
PIB28_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-35 B*3508 ALPHA CHAIN	84-115								
PIB29_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-37 B*3701 ALPHA CHAIN	88-115								
PIB32_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-39 B*3902 ALPHA CHAIN	87-114								
PIB33_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-60(B-40) B*4001 ALPHA CHAIN	60-91								
PIB34_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4002 ALPHA CHAIN	84-115								
PIB35_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4003 ALPHA CHAIN	84-115								
PIB36_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-40 B*4004 ALPHA CHAIN	84-115								
PIB38_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-41 B*4101 ALPHA CHAIN	84-115								
PIB39_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-42 B*4201 ALPHA CHAIN	87-114								
PIB40_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4401 ALPHA CHAIN	84-111								
PIB41_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4402 ALPHA CHAIN	87-114								
PIB42_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-44(B-12) B*4403 ALPHA CHAIN	87-114								
PIB43_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-45(B-12) B*4501 ALPHA CHAIN	84-115								
PIB44_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-46 B*4601 ALPHA CHAIN	87-114								
PIB45_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-47 B*4701 ALPHA CHAIN	88-115								
PIB46_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-48 B*4801 ALPHA CHAIN	84-115								
PIB47_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, B-49(B-21) B*4901 ALPHA CHAIN	87-114								
PIB48_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-50(B-21) B*5001 ALPHA CHAIN	84-115								
PIB53_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-52(B-5) B*5201 ALPHA CHAIN	87-114								
PIB55_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-54(BW-22) B*5401 ALPHA CHAIN	87-114								
PIB56_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5501 ALPHA CHAIN	87-114								
PIB57_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-55(BW-22) B*5502 ALPHA CHAIN	87-114								
PIB58_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5601 ALPHA CHAIN	87-114								
PIB59_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, BW-56(BW-22) B*5602 ALPHA CHAIN	87-114								
PIC01_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0101 ALPHA CHAIN	87-114								
PIC02_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-1 CW*0102 ALPHA CHAIN	87-114								
PIC03_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0201 ALPHA CHAIN	87-114								
PIC04_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-2 CW*0202 ALPHA CHAIN	87-114								
PIC06_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-3 CW*0301 ALPHA CHAIN	87-114								
PIC12_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0801 ALPHA CHAIN	87-114								
PIC13_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0802 ALPHA CHAIN	87-114								
PIC14_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW-8 CW*0803 ALPHA CHAIN	87-114								
PIC17_HUMAN	HLA CLASS I HISTOCOMPATIBILITY ANTIGEN, CW*1401 ALPHA CHAIN PRECURSOR	87-114								
P23A6_HUMAN	6971 KD (2'-5')-OLIGONUCLEOTIDE SYNTHETASE	593-620								
P2AAA_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, ALPHA ISOFORM	12-49	54-81							
P2AAB_HUMAN	PROTEIN PHOSPHATASE PP2A, 65 KD REGULATORY SUBUNIT, BETA ISOFORM	9-36	41-68	79-106						
P2BAB_HUMAN	PROTEIN PHOSPHATASE PP2A, 55 KD REGULATORY SUBUNIT, ALPHA ISOFORM	177-218								
P411_HUMAN	ERYTHROID PROTEIN 4.1 (BAND 4.1, ERYTHROCYTE FORM)	32-66								

PCGENE	10717846 Moll/Serch on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCART_HUMAN	PROTEIN CALRETININ (29 KD CALBINDIN)	217-244								
PCASB_HUMAN	BETA CASEIN PRECURSOR	14-48								
PCATA_HUMAN	CATALASE (EC 1.11.1.6)	422-436								
PCATD_HUMAN	CATHEPSIN D PRECURSOR (EC 3.4.23.5)	253-282								
PCATH_HUMAN	CATHEPSIN H PRECURSOR (EC 3.4.22.16)	41-68								
PCATL_HUMAN	CATHEPSIN L PRECURSOR (EC 3.4.22.15) (MAJOR EXCRETED PROTEIN) (MEP)	278-305								
PCATS_HUMAN	CATHEPSIN S PRECURSOR (EC 3.4.22.27)	30-57	142-169							
PCBFB_HUMAN	CCAAT-BINDING TRANSCRIPTION FACTOR SUBUNIT B (CBF-B) (NF-Y PROTEIN)	24-58	138-165							
PCBGH_HUMAN	CORTICOSTEROID-BINDING GLOBULIN PRECURSOR (CBG) (TRANSCORTIN)	88-122								
PCBPB_HUMAN	CARBOXYPEPTIDASE B PRECURSOR (EC 3.4.17.2) (PANCREAS-SPECIFIC PROTEIN)	69-129	278-305	319-346						
PCBPH_HUMAN	CARBOXYPEPTIDASE H PRECURSOR (EC 3.4.17.10) (CARBOXYPEPTIDASE E) (CPE)	355-382								
PCCB1_HUMAN	CD31 HOMOLOG (P1-CD31) (FRAGMENT)	35-62								
PCCB7_HUMAN	PROTEIN CDC27HS	209-240								
PCCG1_HUMAN	TRANSCRIPTION INITIATION FACTOR TFIID 230 KD SUBUNIT (TFP-ASSOCIATED)	1798-1342								
PCDI4_HUMAN	MONOCYTE DIFFERENTIATION ANTIGEN CD14 PRECURSOR (MYELOID CELL-SPECIFIC)	142-169								
PCD1A_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1A PRECURSOR (CD1A ANTIGEN) (T-CELL)	32-63	281-308							
PCD1E_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD1E PRECURSOR (CD1E ANTIGEN) (R2G1)	77-104								
PCD20_HUMAN	B-LYMPHOCYTE ANTIGEN CD20 (B-LYMPHOCYTE SURFACE ANTIGEN B1) (LEU-16)	226-255								
PCD2R_HUMAN	CD20 RECEPTOR PRECURSOR	226-255								
PCD2I_HUMAN	T-CELL SURFACE ANTIGEN CD2 PRECURSOR (T-CELL SURFACE ANTIGEN)	88-119								
PCD14_HUMAN	HEMOPOIETIC PROGENITOR CELL ANTIGEN CD34 PRECURSOR	74-108								
PCD37_HUMAN	LEUKOCYTE ANTIGEN CD37	101-128								
PCD3G_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD3 GAMMA CHAIN PRECURSOR (T-CELL RECEPT 7-34)	96-130	183-217							
PCD3L_HUMAN	CD30 LIGAND (CD30-L)	328-355								
PCD4X_HUMAN	CD44 ANTIGEN, EPITHELIAL FORM PRECURSOR (CD44E) (PHAGOCYTIC)	44-71	240-267							
PCD4_HUMAN	T-CELL SURFACE GLYCOPROTEIN CD4 PRECURSOR (T-CELL SURFACE ANTIGEN)	87-114								
PCD53_HUMAN	LEUKOCYTE SURFACE ANTIGEN CD53	118-177								
PCD72_HUMAN	B-CELL DIFFERENTIATION ANTIGEN CD72 (LYB-2)	5-32								
PCD3K_HUMAN	CELL DIVISION PROTEIN KINASE 3 (EC 2.7.1.1)	5-32								
PCD55_HUMAN	CELL DIVISION PROTEIN KINASE 5 (EC 2.7.1.1) (KINASE PSSALRE)	296-330								
PCBBB_HUMAN	CCAAT-ENHANCER BINDING PROTEIN BETA (CEBP BETA) (NUCLEAR FACTOR)	568-595								
PCENB_HUMAN	MAJOR CENTROMERE AUTOANTIGEN B (CENTROMERE PROTEIN B) (CENP-B)	433-460								
PCENC_HUMAN	CENTROMERE PROTEIN C (CENP-C) (CENTROMERE AUTOANTIGEN C)	372-399	493-520	533-607	715-752	767-825	850-884	903-947	963-995	1080-1107
PCENE_HUMAN	CENTROMERIC PROTEIN E (CENP-E PROTEIN)	1122-1149	1179-1239	1250-1277	1340-1367	1440-1481	1486-1556	1646-1680	1684-1724	1808-1846
PCERU_HUMAN	CERULOPLASMIN PRECURSOR (EC 1.16.3.1) (FERROXIDASE)	1852-1883	1890-1917	1940-1988	2021-2048	2288-2318	2440-2478	2498-2563		
PCETR_HUMAN	CHOLESTERYL ESTER TRANSFER PROTEIN PRECURSOR	913-940								
PCFTR_HUMAN	CYSTIC FIBROSIS TRANSMEMBRANE CONDUCTANCE REGULATOR (CFTR)	71-108								
PCGCC_HUMAN	COMP-GATED CATION CHANNEL PROTEIN (CYCLIC NUCLEOTIDE)	158-189	802-829	895-922	1243-1270					
PCGL_HUMAN	CYSTATHIONINE GAMMA-LYASE (EC 4.4.1.1)	216-243								
PCHLR_HUMAN	CHLORDEONE REDUCTASE (EC 1.1.1.225) (CDR)	315-349								
PCHOT_HUMAN	CHOROIDEAEMIA-LIKE PROTEIN	17-51								
PCHOR_HUMAN	CHOROIDEAEMIA-LIKE PROTEIN	56-97	230-257	451-478						
PCINA_HUMAN	SODIUM CHANNEL PROTEIN, CARDIAC AND SKELETAL MUSCLE ALPHA-SUBUNIT	112-139								
PCICA_HUMAN	CLATHRIN LIGHT CHAIN A (BRAIN AND LYMPHOCYTE LCA)	787-814	943-970							
PCICB_HUMAN	CLATHRIN LIGHT CHAIN B (BRAIN AND LYMPHOCYTE LCB)	121-148								
PCICL_HUMAN	CALYCLIN (PROLACTIN RECEPTOR ASSOCIATED PROTEIN) (PRA) GROWTH	123-157								
PCICU_HUMAN	CLUSTERIN (COMPLEMENT-ASSOCIATED PROTEIN SP-40,40)	9-50								
PCIGA_HUMAN	CHROMOGRANIN A PRECURSOR (CGA) (CONTAINS: PANCREASTATIN AND WE-14)	36-98	323-350	367-394						
PCINTF_HUMAN	CILIARY NEUTROPHILIC FACTOR (CNTF)	93-120	430-457							
PCO02_HUMAN	TUMOR-ASSOCIATED ANTIGEN CO-02	66-93								
PCO03_HUMAN	COMPLEMENT C3 PRECURSOR	29-56	95-148							
PCO04_HUMAN	COMPLEMENT C4 PRECURSOR	242-276	593-620	837-867						
PCO05_HUMAN	COMPLEMENT C5 PRECURSOR	1792-1319								
PCO06_HUMAN	COMPLEMENT C6 PRECURSOR	298-342	517-564	970-997	1270-1304					
PCO07_HUMAN	COMPLEMENT C7 PRECURSOR	367-398								
		225-261								

PCGENE	107s/784d Motif Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PCOXT1_HUMAN	Cytochrome C oxidase polypeptide 1 (EC 1.9.3.1)	353-380								
PCOXT2_HUMAN	Cytochrome P450 VII (cholesterol 7-alpha-monooxygenase)	263-290	346-373							
PCPCH1_HUMAN	Cytochrome P450 1C17 (EC 1.14.14.1) (P450-24C) (fragment)	109-136								
PCPEI1_HUMAN	Cytochrome P450 1E1 (EC 1.14.14.1) (P450-1) (ethanol inducible)	231-258								
PCPSM1_HUMAN	Carbamoyl-phosphate synthase (ammonia) mitochondrial precursor	112-146	420-447							
PCPT2_HUMAN	Mitochondrial carnitine palmitoyl transferase II precursor	410-437								
PCPT7_HUMAN	Cytochrome P450 2A1 (P450-C17) (EC 1.14.99.3) (steroid 17-alpha-)	226-257								
PCPV1_HUMAN	Cytochrome P450 2A1 (aromatase) (EC 1.14.14.1) (estrogen)	234-271								
PCR2_HUMAN	Complement receptor type 2 precursor (CR2) (complement C3d receptor)	986-1013								
PCRCM1_HUMAN	Colorectal mutant cancer protein (MCC protein)	68-126	379-420	633-678	724-754	763-790				
PCREB1_HUMAN	CAMP response element binding proteins A and B (CREB-A and CREB-B)	94-125								
PCREP1_HUMAN	CAMP response element binding protein CRE-BP1	380-414								
PCRP1_HUMAN	C-reactive protein precursor	60-87	150-177							
PCSI1_HUMAN	Cleavage signal-1 protein (CS-1)	203-233								
PCSF1_HUMAN	Macrophage colony stimulating factor-1 precursor (CSF-1) (M-CSF)	143-170								
PCST3_HUMAN	Cleavage stimulation factor, 50 kD subunit (CSTF 50 kD subunit) (CF-1)	6-33								
PCTN1_HUMAN	Alpha-catenin (cadherin-associated protein)	681-718								
PCTN2_HUMAN	Alpha-catenin related protein (catenin alpha-2)	680-717								
PCX26_HUMAN	Gap junction beta-2 protein (connexin 26) (CX26)	108-139								
PCX32_HUMAN	Gap junction beta-1 protein (connexin 32) (CX32) (gap junction 28 kD)	117-144								
PCX37_HUMAN	Gap junction alpha-4 protein (connexin 37) (CX37)	88-115								
PCYB5_HUMAN	Cytochrome B5	3-42								
PCYGI1_HUMAN	Guanylate cyclase soluble, beta-1 chain (EC 4.6.1.2) (70 kD chain)	80-107	126-153	332-396						
PCYGA1_HUMAN	Guanylate cyclase soluble, alpha-2 chain (EC 4.6.1.2)	106-133								
PCYGR1_HUMAN	Retinal guanylyl cyclase precursor (EC 4.6.1.2)	824-851								
PCYRO1_HUMAN	Cytokine receptor common gamma chain precursor (gamma-c)	293-320								
PCYTA1_HUMAN	Cystatin A (steifin A) (cystatin A)	27-58								
PDBL1_HUMAN	Proto-oncogene Dbl precursor (contains: MCF2)	233-283	485-524	766-793	801-845					
PDESM1_HUMAN	Desmin	151-180	272-312							
PDES2_HUMAN	Desmin	31-79	113-143	217-244	269-317	382-434	437-467	528-558	563-598	630-674
PDPAP1_HUMAN	Aldehyde dehydrogenase, dimeric NADP-preferencing (EC 1.2.1.3)	697-734	738-789	1456-1493	1508-1535					
PDMD1_HUMAN	Dystrophin	31-58								
PDN11_HUMAN	DNA ligase I (EC 6.3.1.1) (polynucleotide synthase (ATP))	86-116	338-365	484-511	753-780	976-1003	1012-1039	1201-1228	1364-1394	1615-1674
PDN12_HUMAN	DNA ligase I (EC 6.3.1.1) (polynucleotide synthase (ATP))	45-76								
PDN13_HUMAN	DNA polymerase alpha (EC 2.7.7.7)	130-157	355-392	732-759						
PDN14_HUMAN	DNA polymerase delta catalytic chain (EC 2.7.7.7)	25-74	1009-1037	1100-1127						
PDN15_HUMAN	DNA polymerase epsilon catalytic chain (EC 2.7.7.7)	729-756								
PDN16_HUMAN	Dipeptidyl peptidase IV (EC 3.14.15) (DPP IV) (T-cell activation)	29-77	114-148							
PDN17_HUMAN	Deoxyribonuclease I precursor (EC 3.1.21.1) (DNase I)	44-71								
PDN18_HUMAN	Desmocollin 1 precursor (desmosomal glycoprotein II and III)	80-107	355-398							
PDN19_HUMAN	Desmoglein 1 precursor (desmosomal glycoprotein I) (DGI)	15-42	271-298	497-531						
PDN20_HUMAN	Desmoglein 3 precursor (130 kD pemphigus vulgaris antigen) (PVA)	211-248	325-352							
PDN21_HUMAN	Divergent upstream protein (DUP)	584-618								
PDN22_HUMAN	V-erbB related protein ear-1	523-550								
PDN23_HUMAN	EBV-induced G protein-coupled receptor 2 (EBI2)	44-78								
PDN24_HUMAN	Elongation factor 1-beta (EF-1-beta)	105-132								
PDN25_HUMAN	Elongation factor 1-delta (EF-1-delta)	84-118								
PDN26_HUMAN	Epidermal growth factor receptor precursor (EC 2.7.1.112)	64-91	440-467							
PDN27_HUMAN	Epidermal growth factor precursor, kidney (EGF) (urogastrone)	47-74								
PDN28_HUMAN	ETS-related transcription factor ELF-1	551-588								
PDN29_HUMAN	Endoplasmic precursor (94 kD glucose-regulated protein) (GRP94) (GRP96)	47-74	246-273							
PDN30_HUMAN	Retrovirus-related env polyprotein	382-420								
PDN31_HUMAN	IG epsilon chain C region	161-188								
PDN32_HUMAN	Protein disulfide isomerase-related protein precursor (ERp72)	58-85	142-169	458-485						
PDN33_HUMAN	DNA excision repair protein ERCC-1	240-270								

PCGENE	1071784 Motif Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN									
PERC6_HUMAN	EXCISION REPAIR PROTEIN ERCC-6.	160-209	939-973							
PESTR_HUMAN	ESTROGEN RECEPTOR (ER).	451-488								
PET2_HUMAN	ENDOTHELIN-2 PRECURSOR (ET-2).	133-160								
PET3_HUMAN	ENDOTHELIN-3 PRECURSOR (ET-3).	182-209								
PEVZA_HUMAN	EVIZIA PROTEIN PRECURSOR.	29-36								
PEZRL_HUMAN	EBZRL (P91) (GYTOVILLIN) (VILLIN-2).	119-146	351-392	402-429	512-539					
PFAS_HUMAN	COAGULATION FACTOR V PRECURSOR.	2103-2137								
PFAS8_HUMAN	COAGULATION FACTOR VIII PRECURSOR (PROCOAGULANT COMPONENT).	871-908	1007-1034	1194-1230						
PFAS9_HUMAN	COAGULATION FACTOR IX PRECURSOR (EC 3.4.21.22) (CHRISTMAS FACTOR).	271-298								
PFAB1_HUMAN	FATTY ACID-BINDING PROTEIN, INTESTINAL.	98-125								
PFASA_HUMAN	APOTOSIS-MEDIATING SURFACE ANTIGEN FAS PRECURSOR (APO-1 ANTIGEN).	23-50	249-301	306-333						
PFCE2_HUMAN	LOW AFFINITY IMMUNOGLOBULIN EPSILON FC RECEPTOR (LYMPHOCYTE IGE).	81-115								
PFCEA_HUMAN	HIGH AFFINITY IMMUNOGLOBULIN EPSILON RECEPTOR (ALPHA-SUBUNIT (FCER1).	140-174								
PFGR3_HUMAN	FIBROBLAST GROWTH FACTOR RECEPTOR 2 PRECURSOR (EC 2.7.1.12).	310-337								
PFIBA_HUMAN	FIBRINOGEN ALPHA CHAIN PRECURSOR.	131-165	427-457							
PFIBB_HUMAN	FIBRINOGEN BETA CHAIN PRECURSOR.	149-186								
PFIBG_HUMAN	FIBRINOGEN GAMMA-A CHAIN PRECURSOR.	59-93	125-160							
PFIBH_HUMAN	FIBRINOGEN GAMMA-B CHAIN (FIBRINOGEN GAMMA).	59-93	125-160							
PFINC_HUMAN	FIBRONECTIN PRECURSOR.	2168-2199								
PFEL1_HUMAN	FLI-1 ONCOGENE (ERGB TRANSCRIPTION FACTOR).	172-209								
PFMO3_HUMAN	DIMETHYLANILINE MONOOXYGENASE (N-OXIDE FORMING) 3 (EC 1.14.13.8).	184-218	256-283	301-328						
PFOS_HUMAN	P53-C-FOS PROTO-ONCOGENE PROTEIN.	162-193								
PFRA1_HUMAN	FOS-RELATED ANTIGEN 1.	131-168								
PFRA2_HUMAN	FOS-RELATED ANTIGEN 2.	149-180								
PFRUH_HUMAN	FERRITIN HEAVY CHAIN.	7-34								
PFRL_HUMAN	FERRITIN LIGHT CHAIN.	3-33								
PFSHR_HUMAN	FOLLICLE STIMULATING HORMONE RECEPTOR PRECURSOR (FSH-R).	364-395								
PFUCQ_HUMAN	TISSUE ALPHA-L-FUCOSIDASE PRECURSOR (EC 3.2.1.51) (ALPHA-L-FUCOSIDASE).	308-335								
PFUMH_HUMAN	FUMARATE HYDATASE, MITOCHONDRIAL (EC 4.2.1.2) (FUMARASE).	424-451								
PGOS1_HUMAN	PUTATIVE LYMPHOCYTE G0/G1 SWITCH PROTEIN.	56-83								
PG1P_HUMAN	PROTEIN KINASE C SUBSTRATE, 80 KD PROTEIN, HEAVY CHAIN (PKCSH).	146-173								
PGPI_HUMAN	GLUCOSE-6-PHOSPHATE ISOMERASE (GPI) (EC 5.3.1.9) (PHOSPHOGLUCOSE).	16-50								
PGT2_HUMAN	MAJOR GASTROINTESTINAL TUMOR-ASSOCIATED PROTEIN GA733-2 PRECURSOR.	181-215								
PGA12_HUMAN	GALACTOKINASE 2 (EC 2.7.1.6).	254-281								
PGA11_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-1 SUBUNIT PRECURSOR (GABA(A)210-237).									
PGA13_HUMAN	GAMMA-AMINOBUTYRIC-ACID RECEPTOR ALPHA-3 SUBUNIT PRECURSOR (GABA(A)211-255).									
PGASR_HUMAN	GASTRIN/CHOLECYSTOKININ TYPE B RECEPTOR (CCK-B RECEPTOR).	75-105								
PGB01_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(I), ALPHA SUBUNIT 1.	22-49								
PGB02_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(O), ALPHA SUBUNIT 2.	22-49								
PGB03_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(K), ALPHA SUBUNIT (G(I) ALPHA-3).	22-49								
PGB04_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(S), ALPHA SUBUNIT (ADENYLATE).	7-34								
PGB05_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(Y), ALPHA SUBUNIT (ALPHA-11).	95-122								
PGB06_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(V)(G(S)G(T) BETA SUBUNIT 3).	65-92								
PGB07_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN BETA SUBUNIT-LIKE PROTEIN 12.3.	110-137	255-282	289-316						
PGB08_HUMAN	INTERFERON-INDUCED GUANYLATE-BINDING PROTEIN 2 (GUANINE NUCLEOTIDE-454-488).									
PGBT2_HUMAN	GUANINE NUCLEOTIDE-BINDING PROTEIN G(T), ALPHA-2 SUBUNIT (TRANSDUCIN).	22-49								
PGCF_HUMAN	GC-RICH SEQUENCE DNA-BINDING FACTOR (GCF) (TRANSCRIPTION FACTOR 9).	200-227	293-320	367-394	396-423	647-674				
PGCH1_HUMAN	GTP CYCLOHYDROLASE I (EC 3.5.4.16).	165-192								
PGCR1_HUMAN	GLUCOCORTICOID RECEPTOR, ALPHA (GR).	167-194								
PGCRB_HUMAN	GLUCOCORTICOID RECEPTOR, BETA (GR).	167-194								
PGCSP_HUMAN	GLYCINE DEHYDROGENASE (DECARBOXYLATING) PRECURSOR (EC 1.4.4.2).	460-487								
PGDN_HUMAN	GLIA DERIVED NEXIN (GDN) (PROTEASE NEXIN 1).	83-110								
PGELS_HUMAN	GELSOLIN PRECURSOR, PLASMA (ACTIN-DEPOLYMERIZING FACTOR) (ADF).	701-728								
PGFAP_HUMAN	GLIAL FIBRILLARY ACIDIC PROTEIN, ASTROCYTE.	189-216	349-376	384-411						
PGLAS_HUMAN	N-ACETYLGLUCOSAMINE-6-SULFATASE PRECURSOR (EC 3.1.6.14) (G6S).	170-221								
PGLPK_HUMAN	GLYCEROL KINASE (EC 2.7.1.30) (ATP-GLYCEROL 3-PHOSPHOTRANSFERASE).	78-112	251-278							
PGLY1_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, CYTOSOLIC (EC 2.1.2.1) (SERINE).	32-59	344-371							

PCGENE	10711784 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN									
PGLY2_HUMAN	SERINE HYDROXYMETHYLTRANSFERASE, MITOCHONDRIAL (EC 2.1.2.1) (SERINE)	417-444								
PGR78_HUMAN	78 KD GLUCOSE REGULATED PROTEIN PRECURSOR (GRP 78) (IMMUNOGLOBULIN	598-625								
PGR42_HUMAN	GLYCINE RECEPTOR ALPHA-2 CHAIN PRECURSOR	142-169	341-368							
PGR4V_HUMAN	GRAVIN (FRAGMENT)	9-43	61-88							
PGRFR_HUMAN	GROWTH HORMONE-RELEASING HORMONE RECEPTOR PRECURSOR (GHRH RECEPT	128-155								
PGTH2_HUMAN	GLUTATHIONE S-TRANSFERASE HA SUBUNIT 2 (EC 2.1.1.19) (GTH2) (CLASS-	64-91								
PGTFA_HUMAN	GTPASE-ACTIVATING PROTEIN (GAP) (RAS P21 PROTEIN ACTIVATOR)	474-501	1012-1047							
PGTK1_HUMAN	GLUCOSE TRANSPORTER TYPE 1, ERYTHROCYTE/BRAIN	274-301								
PGTR3_HUMAN	GLUCOSE TRANSPORTER TYPE 3, BRAIN	272-299								
PGTR4_HUMAN	GLUCOSE TRANSPORTER TYPE 4, INSULIN-RESPONSIVE	290-317								
PH10_HUMAN	HISTONE H1	44-89								
PH1A_HUMAN	HISTONE H1A (H1.1)	73-104								
PH1B_HUMAN	HISTONE H1B (H1.4)	70-101								
PH1C_HUMAN	HISTONE H1C (H1.3)	71-102								
PH1D_HUMAN	HISTONE H1D (H1.2)	70-101								
PH1T_HUMAN	HISTONE H1T	74-105								
PH2B0_HUMAN	HISTONE H2B.1	20-47								
PH2B2_HUMAN	HISTONE H2B.2	20-47								
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PCGENE	10711784 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN									
PILIR_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE I PRECURSOR (IL-1R1) (P80)	437-467								
PILIS_HUMAN	INTERLEUKIN-1 RECEPTOR, TYPE II PRECURSOR (IL-1R2)	159-186								
PILSR_HUMAN	INTERLEUKIN-5 RECEPTOR ALPHA CHAIN PRECURSOR (IL-5R-ALPHA)	87-114								
PIL6_HUMAN	INTERLEUKIN-6 PRECURSOR (IL-6) (B-CELL STIMULATORY FACTOR 2) (BSF-2)	112-139								
PINAI_HUMAN	INTERFERON ALPHA-1 PRECURSOR	94-121								
PINAR_HUMAN	INTERFERON ALPHA-1 PRECURSOR (IFN-ALPHA-REC)	90-117	164-191	300-327	308-333					
PINB_HUMAN	INTERFERON BETA PRECURSOR (FIBROBLAST)	88-129								
PINI_HUMAN	INTERFERON-INDUCED 17 KD PROTEIN (CONTAINS: INTERFERON-INDUCED 15 KD	83-121								
PIN6_HUMAN	INTERFERON-INDUCED 16 KD PROTEIN (IFI-56K)	51-78	216-245	393-430						
PINSR_HUMAN	INSULIN RECEPTOR PRECURSOR (EC 2.7.1.112) (IR)	592-619	229-273	326-363	386-450					
PINVO_HUMAN	INVOLUCRIN	119-146								
PIPIK_HUMAN	ID-MYO-INOSITOL-TRISPHOSPHATE 3-KINASE A (EC 2.7.1.127) (INOSITOL	121-162								
PIPSP_HUMAN	PLASMA SERINE PROTEASE (PROTEIN C) INHIBITOR PRECURSOR (PCI)	90-117	206-233							
PIRBP_HUMAN	INTERPHOTORECEPTOR RETINOID-BINDING PROTEIN PRECURSOR (IRBP)	670-697								
PIRF2_HUMAN	INTERFERON REGULATORY FACTOR 2 (IRF-2)	157-193								
PITSP_HUMAN	75 KD INOSITOL-1,4,5-TRISPHOSPHATE 3-PHOSPHATASE PRECURSOR	235-262								
PITAZ_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IIA PRECURSOR (GPIIa) (COLLAGEN RECEPTOR	579-606	900-927							
PITAS_HUMAN	FIBRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-F)	230-284	657-695	765-792						
PITAG_HUMAN	INTEGRIN ALPHA-6 PRECURSOR (VLA-6) (INTEGRIN ALPHA-E) (CD49F)	884-911	944-974							
PITAL_HUMAN	LEUKOCYTE ADHESION GLYCOPROTEIN LFA-1 ALPHA CHAIN PRECURSOR (LEUKOC	256-283	310-341	795-822						
PITAM_HUMAN	CELL SURFACE GLYCOPROTEIN MAC-1 ALPHA SUBUNIT PRECURSOR (CR3 ALPHA	1044-1078								
PITAV_HUMAN	VITRONECTIN RECEPTOR ALPHA SUBUNIT PRECURSOR (INTEGRIN ALPHA-V)	230-264								
PITB1_HUMAN	FIBRONECTIN RECEPTOR BETA SUBUNIT PRECURSOR (INTEGRIN BETA-1) (CD29)	218-245	354-399							
PITB2_HUMAN	CELL SURFACE ADHESION GLYCOPROTEIN LFA-1, CR1 AND P150,95, BETA-	339-366	705-732							
PITB3_HUMAN	PLATELET MEMBRANE GLYCOPROTEIN IIIA PRECURSOR (GPIIb) (INTEGRIN BETA-	324-351								
PITB4_HUMAN	INTEGRIN BETA-4 SUBUNIT PRECURSOR (GP150)	342-369								
PITB5_HUMAN	INTEGRIN BETA-5 SUBUNIT PRECURSOR	724-751								
PITB6_HUMAN	INTEGRIN BETA-6 SUBUNIT PRECURSOR	311-338	352-393							
PITB8_HUMAN	INTEGRIN BETA-8 SUBUNIT PRECURSOR	362-399	696-737							
PITIZ_HUMAN	INTER-ALPHA-TRYPsin INHIBITOR COMPLEX COMPONENT II PRECURSOR	134-161	425-452	772-818						
PKICJ_HUMAN	KERATIN, TYPE I CYTOSKELETAL 10 (CYTOKERATIN 10) (K10)	154-187	196-227	337-399	428-462					
PKICM_HUMAN	KERATIN, TYPE I CYTOSKELETAL 13 (CYTOKERATIN 13) (K13)	112-142								
PKICN_HUMAN	KERATIN, TYPE I CYTOSKELETAL 14 (CYTOKERATIN 14) (K14)	122-152	306-335	393-424						
PKICO_HUMAN	KERATIN, TYPE I CYTOSKELETAL 15 (CYTOKERATIN 15) (K15)	113-143								
PKICP_HUMAN	KERATIN, TYPE I CYTOSKELETAL 16 (CYTOKERATIN 16) (K16)	308-339								
PKICQ_HUMAN	KERATIN, TYPE I CYTOSKELETAL 17 (CYTOKERATIN 17) (K17)	122-152	302-346	393-431						
PKICR_HUMAN	KERATIN, TYPE I CYTOSKELETAL 18 (CYTOKERATIN 18) (K18)	87-114	251-298	337-385						
PKICS_HUMAN	KERATIN, TYPE I CYTOSKELETAL 19 (CYTOKERATIN 19) (K19)	88-118	317-362	370-397						
PKICJ1_HUMAN	KERATIN, TYPE I CYTOSKELETAL 1 (CYTOKERATIN 1) (K1) (CYTOSKELETAL 67	196-226	346-384	390-467						
PKIC2_HUMAN	KERATIN, TYPE I CYTOSKELETAL 65 KD	215-248	364-405	461-488						
PKIC4_HUMAN	KERATIN, TYPE II CYTOSKELETAL 4 (CYTOKERATIN 4) (K4) (FRAGMENT)	42-73	126-153	189-248						
PKIC5_HUMAN	KERATIN, TYPE II CYTOSKELETAL 5 (CYTOKERATIN 5) (K5) (59 KD	185-246	332-373							
PKIC6_HUMAN	KERATIN, TYPE II CYTOSKELETAL 6 (CYTOKERATIN 6) (K6B KERATIN)	178-239	325-366	422-449						
PKIC8_HUMAN	KERATIN, TYPE II CYTOSKELETAL 8 (CYTOKERATIN 8) (K8)	140-167	120-161	217-244						
PKIC9_HUMAN	KERATIN, TYPE II CYTOSKELETAL 36 KD (K6A KERATIN) (FRAGMENT)	7-34								
PK6PF_HUMAN	6-PHOSPHOFRUCTOKINASE, MUSCLE TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	140-167								
PK6PL_HUMAN	6-PHOSPHOFRUCTOKINASE, LIVER TYPE (EC 2.7.1.11) (PHOSPHOFRUCTOKINASE	49-80	128-159							
PKABL_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE ABL (EC 2.7.1.112) (P150)	498-525								
PKAC_HUMAN	IG KAPPA CHAIN C REGION	37-85								
PKALM_HUMAN	KALLMANN SYNDROME PROTEIN PRECURSOR (ADHESION MOLECULE-LIKE X-LINK	380-414								
PKAP0_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE IALPHA REGULATORY CHAIN	179-206								
PKAP1_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE IBETA REGULATORY CHAIN	177-204								
PKAP2_HUMAN	CAMP-DEPENDENT PROTEIN KINASE TYPE IALPHA REGULATORY CHAIN	175-202	290-317							
PKBFI_HUMAN	NUCLEAR FACTOR KAPPA-B SUBUNIT-1 (NF-KAPPA-B P105 SUBUNIT)	529-570								
PKCRB_HUMAN	CREATINE KINASE, B CHAIN (EC 2.7.3.2)	301-328								
PKCEK_HUMAN	TYROSINE PROTEIN KINASE ECK PRECURSOR (EC 2.7.1.112) (EPITHELIAL CELL	466-493								
PKFER_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FER (EC 2.7.1.112) (P94-FER)	219-246	564-591							

PCGENE	1071784 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PKFES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FES/FPS (EC 2.7.1.112) (C-FES)	101-145	295-322							
PKFLT_HUMAN	RECEPTOR-RELATED TYROSINE KINASE FLT PRECURSOR (EC 2.7.1.112)	208-235	319-353							
PKFMS_HUMAN	MACROPHAGE COLONY STIMULATING FACTOR 1 RECEPTOR PRECURSOR (CSF-1-R)	293-320								
PKFFN_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE FYN (EC 2.7.1.112) (P59-FYN)	199-233								
PKGPB_HUMAN	CGMP-DEPENDENT PROTEIN KINASE BETA ISOZYME (CKK) (EC 2.7.1.37)	17-54								
PKHEK_HUMAN	TYROSINE KINASE HEK RECEPTOR PRECURSOR (EC 2.7.1.112)	646-673								
PKINH_HUMAN	KINESIN HEAVY CHAIN	125-155	425-452	471-542	633-680	689-716	872-899			
PKKIT_HUMAN	KIT PROTO-ONCOGENE TYROSINE KINASE PRECURSOR (EC 2.7.1.112)	235-263								
PKMET_HUMAN	HEPATOCYTE GROWTH FACTOR RECEPTOR PRECURSOR (MET PROTO-ONCOGENE)	898-925								
PKNH_HUMAN	KINNOGEN HAW PRECURSOR (ALPHA-2-THIOL PROTEINASE INHIBITOR)	505-532								
PKP36_HUMAN	GALACTOSYLTRANSFERASE ASSOCIATED PROTEIN KINASE PSBGT4 (EC 2.7.1.1)	81-108								
PKP68_HUMAN	INTERFERON-INDUCED, DOUBLE-STRANDED RNA-ACTIVATED PROTEIN KINASE	149-179	191-225	285-312						
PKP78_HUMAN	PUTATIVE SERINE/THREONINE-PROTEIN KINASE P78 (EC 2.7.1.1)	582-609								
PKPCL_HUMAN	PROTEIN KINASE C, ETA TYPE (EC 2.7.1.1) (NPKC-ETA) (PKC-L)	318-345								
PKPT1_HUMAN	SERINE/THREONINE-PROTEIN KINASE PCTAIRE-1 (EC 2.7.1.1)	149-176	209-253							
PKPY1_HUMAN	PYRUVATE KINASE, M1 (MUSCLE) ISOZYME (EC 2.7.1.40) (CYTOSOLIC THYROID)	243-289								
PKPY2_HUMAN	PYRUVATE KINASE, M2 ISOZYME (EC 2.7.1.40)	243-289								
PKRET_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE RET (EC 2.7.1.112)	183-217								
PKROS_HUMAN	ROS PROTO-ONCOGENE TYROSINE-PROTEIN KINASE (EC 2.7.1.112) (FRAGMENT)	157-203								
PKSRC_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE SRC (EC 2.7.1.112) (P60-SRC)	143-170								
PKU7_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P70 (70 KD SUBUNIT OF KU ANTIGEN)	235-279								
PKUR6_HUMAN	LUPUS KU AUTOANTIGEN PROTEIN P86 (86 KD SUBUNIT OF KU ANTIGEN)	238-292								
PKYES_HUMAN	PROTO-ONCOGENE TYROSINE-PROTEIN KINASE YES (EC 2.7.1.112) (P61-YES)	209-243								
PLAM1_HUMAN	LAMIN B1	32-66	117-144	152-193	214-241	397-424	480-507	510-539		
PLAM2_HUMAN	LAMIN A (70 KD LAMIN)	32-88	114-165	292-343						
PLAM3_HUMAN	LAMIN C	32-88	114-165	292-343						
PLAR_HUMAN	LAR PROTEIN PRECURSOR (LEUKOCYTE ANTIGEN RELATED) (EC 3.1.3.48)	935-969								
PLA_HUMAN	LUPUS LA PROTEIN (SIOGREN SYNDROME TYPE B ANTIGEN (SS-B))	191-222	295-342							
PLCAT_HUMAN	PHOSPHATIDYLCHOLINE-STEROL ACYLTRANSFERASE PRECURSOR (EC 2.3.1.43)	131-158								
PLDHH_HUMAN	L-LACTATE DEHYDROGENASE H CHAIN (EC 1.1.1.27) (LDH-B)	81-108	302-329							
PLDHM_HUMAN	L-LACTATE DEHYDROGENASE M CHAIN (EC 1.1.1.27) (LDH-A)	225-252								
PLDLK_HUMAN	LOW-DENSITY LIPOPROTEIN RECEPTOR PRECURSOR	483-510								
PLECH_HUMAN	ASIALOGLYCOPROTEIN RECEPTOR 1 (HEPATIC LECTIN HI) (ASGPR)	62-96								
PLEMB_HUMAN	P-SELECTIN PRECURSOR (GRANULE MEMBRANE PROTEIN 140) (GMP-140) (PADGEM)	32-59	87-116							
PLGLL_HUMAN	LACTOYLGLUTATHIONE LYASE (EC 4.4.1.5) (METHYLGLYOXALASE)	83-117								
PLIF_HUMAN	LEUKAEMIA INHIBITORY FACTOR PRECURSOR (LIF) (DIFFERENTIATION-)	95-122								
PLINI_HUMAN	LINE-1 REVERSE TRANSCRIPTASE HOMOLOG	152-179	232-263	298-358	671-698	874-901	1036-1066			
PLIPQ_HUMAN	TRIACYLGLYCEROL LIPASE PRECURSOR (EC 3.1.1.1) (LIPASE, GASTRIC)	158-185								
PLIPS_HUMAN	HORMONE SENSITIVE LIPASE (EC 3.1.1.1) (HSL)	305-332								
PLKHA_HUMAN	LEUKOTRIENE A-4 HYDROLASE (EC 3.3.2.6) (LTA-4 HYDROLASE) (LEUKOTRIENE	42-83	290-324							
PLMA_HUMAN	LAMININ A CHAIN PRECURSOR	1318-1345	1741-1771	1785-1812	1824-1851	1884-1921	1965-1999	2026-2039	2091-2118	
PLMB1_HUMAN	LAMININ B1 CHAIN PRECURSOR	1267-1314	1364-1394	1597-1631	1651-1714	1722-1781				
PLMB2_HUMAN	LAMININ B2 CHAIN PRECURSOR	1103-1135	1513-1547							
PLMP2_HUMAN	LYSOSOME-ASSOCIATED MEMBRANE GLYCOPROTEIN 2 PRECURSOR (LAMP-2)	155-182								
PLMX2_HUMAN	ARACHIDONATE 12-LIPOXYGENASE (EC 1.13.11.31) (12-LOX)	341-368								
PLMX3_HUMAN	ARACHIDONATE 5-LIPOXYGENASE (EC 1.13.11.34) (5-LIPOXYGENASE) (5-LO)	50-87								
PLPH_HUMAN	LACTASE-PHLOPHORIN HYDROLASE PRECURSOR (EC 3.2.1.108) (EC 3.2.1.62)	776-803								
PLRFB_HUMAN	PROTEIN-TYROSINE PHOSPHATASE BETA PRECURSOR (EC 3.1.3.48) (PTP-BETA)	140-167	589-637							
PLRGC_HUMAN	PROTEIN-TYROSINE PHOSPHATASE GAMMA PRECURSOR (EC 3.1.3.48)	1081-1108								
PLRP2_HUMAN	PROTEIN-TYROSINE PHOSPHATASE ZETA PRECURSOR (EC 3.1.3.48) (PTP-ZETA)	553-587	1024-1051	1973-2000						
PLSHR_HUMAN	LUTROPIN-CHORIOGONADOTROPIC HORMONE RECEPTOR (LH/CG-R)	66-114	448-480							
PLV2B_HUMAN	IG LAMBDA CHAIN V-J REGION (NEI)	61-88								
PLYAG_HUMAN	LYSOSOMAL ALPHA-GLUCOSIDASE PRECURSOR (EC 3.2.1.20) (ACID MALTASE)	885-912								
PM20M_HUMAN	MITOCHONDRIAL 2-OXOGLUTARATE MALATE CARRIER PROTEIN (OGCP)	50-77								
PMAC2_HUMAN	GALACTOSE-SPECIFIC LECTIN (MAC-2 ANTIGEN) (ICE-BINDING PROTEIN) (35 KD	219-246								
PMAN9_HUMAN	MAN(9)-ALPHA-MANNOSIDASE (EC 3.2.1.1)	414-441								

PCGENE	1071784 Molf Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PMANR_HUMA	MANNOSE-6-PHOSPHATE ISOMERASE (EC 5.3.1.8) (PHOSPHOMANNOSE ISOMERASE)	60-87								
PMANR_HUMA	MACROPHAGE MANNOSE RECEPTOR PRECURSOR	248-284	1147-1182							
PMAP2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 2 (FRAGMENT)	434-478								
PMAP4_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN 4	408-449								
PMAX_HUMAN	MAX PROTEIN	117-144								
PMDM2_HUMA	MDM2 PROTEIN (P53-ASSOCIATED PROTEIN)	235-288								
PMDR1_HUMAN	MULTIDRUG RESISTANCE PROTEIN 1 (P-GLYCOPROTEIN 1)	561-595								
PMERL_HUMAN	MERLIN (SCHWANNOMIN)	377-407	532-566							
PMERO_HUMAN	MEROSIN HEAVY CHAIN (LAMININ CHAIN A2) (FRAGMENT)	71-105	139-173	431-458	791-818					
PMGMT_HUMA	METHYLATED-DNA-PROTEIN-CYSTEINE METHYLTRANSFERASE (EC 2.1.1.60) (6-O-)	91-118								
PMK1P_HUMAN	MITOTIC KINESIN-LIKE PROTEIN-1	207-234	319-346	510-537	549-608					
PMKCH_HUMAN	MELANIN-CONCENTRATING HORMONE PRECURSOR	8-35								
PMK1L_HUMAN	MIXED LINEAGE KINASE 1 (EC 2.7.1.1) (FRAGMENT)	130-157	321-348							
PMKSA_HUMA	METHYLMALONATE-SEMIALDEHYDE DEHYDROGENASE	393-420								
PMOES_HUMAN	MOESIN (MEMBRANE-ORGANIZING EXTENSION SPIKE PROTEIN)	119-146	351-403							
PMPCP_HUMAN	MITOCHONDRIAL PHOSPHATE CARRIER PROTEIN PRECURSOR	286-313								
PMPT3_HUMAN	M-Phase Inducer Phosphatase 3 (EC 3.1.3.48)	72-99								
PMPTK_HUMAN	DUAL SPECIFICITY MITOGEN-ACTIVATED PROTEIN KINASE (EC 2.7.1.1)	19-50								
PMPLI_HUMAN	CATION-INDEPENDENT MANNOSE-6-PHOSPHATE RECEPTOR PRECURSOR (CI MAN-6)	1568-1596	2437-2478							
PMR_P_HUMAN	MULTIDRUG RESISTANCE-ASSOCIATED PROTEIN	396-423	507-548							
PMRHR_HUMAN	MELANOCYTE STIMULATING HORMONE RECEPTOR (MSH-R) (MELANOTROPIN)	38-65								
PMRRE_HUMAN	MACROPHAGE SCAVENGER RECEPTOR TYPES I AND II (MACROPHAGE ACETYLATED)	173-204	230-260							
PMTDM_HUMA	DNA (CYTOSINE-5)-METHYLTRANSFERASE (EC 2.1.1.37) (DNA)	387-414	601-628							
PMTF1_HUMAN	MITOCHONDRIAL TRANSCRIPTION FACTOR 1 PRECURSOR (MTTF1)	181-212								
PMUTL_HUMAN	METHYLMALONYL-COA MUTASE PRECURSOR (EC 5.4.99.2) (MCM)	468-519								
PMX2_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MAXA (INTERFERON-)	108-150								
PMX2Q_HUMAN	INTERFERON-REGULATED RESISTANCE GTP-BINDING PROTEIN MAXB (P78-RELATED)	451-489	670-697							
PMYBA_HUMA	MYB-RELATED PROTEIN A (FRAGMENT)	619-646								
PMYBB_HUMAN	MYB-RELATED PROTEIN B	87-117								
PMYCN_HUMA	N-MYC PROTO-ONCOGENE PROTEIN	263-300	413-461							
PMYC_HUMAN	MYC PROTO-ONCOGENE PROTEIN	393-422								
PMYF4_HUMAN	MYOGENIC FACTOR MYF-4 (MYOGENIN)	119-146								
PMYF5_HUMAN	MYOGENIC FACTOR MYF-5	121-148								
PMYF2_HUMAN	MYELIN P2 PROTEIN	70-110								
PMYPR_HUMAN	MYELIN PROTEOLIPID PROTEIN (PLP) (LIPOPHILIN) (CONTAINS: MYELIN)	43-70								
PMYSA_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE ALPHA ISOFORM (FRAGMENT)	38-75	84-111	137-178	236-324	398-435	440-485			
PMYSB_HUMAN	MYOSIN HEAVY CHAIN, CARDIAC MUSCLE BETA ISOFORM	48-75	951-981	997-1044	1088-1122	1192-1234	1266-1332	1360-1408	1442-1479	1488-1532
PMYSE_HUMAN	MYOSIN HEAVY CHAIN, FAST SKELETAL MUSCLE, EMBRYONIC	46-73	860-903	932-1077	1119-1146	1193-1235	1267-1340	1364-1411	1483-1597	1641-1675
PMYSP_HUMAN	MYOSIN HEAVY CHAIN, PERINATAL CARDIAC MUSCLE (FRAGMENT)	1707-1734	1827-1858							
PMYSS_HUMAN	MYOSIN HEAVY CHAIN, SKELETAL MUSCLE (FRAGMENT)	50-77	95-125	141-188	215-272	403-483	507-552	586-624	685-736	784-818
PMYT1_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	823-907	946-987	1049-1076						
PMYTA_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	133-160	193-280	304-349	423-460	468-526	581-608	645-681	743-798	808-835
PMYTC_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	640-678	846-873							
PMYTD_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	492-519	705-735							
PMYTF_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	235-282								
PMYTG_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	234-261	310-337							
PMYTH_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	5-32								
PMYTI_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	50-77	82-112	343-395						
PMYTK_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	170-216	644-671							
PMYTL_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	1145-1172	1388-1422	1639-1666						
PMYTM_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	91-128	431-490							
PMYTN_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	92-126	441-468							
PMYTO_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	101-141	164-194	215-280	315-372	737-764	794-826	872-913		
PMYTP_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	338-365								
PMYTR_HUMAN	MYELIN TRANSCRIPTION FACTOR 1 (MYT1) (FRAGMENT)	166-193								

PCGENE	1071784 Modl Search on All Human Protein Sequences	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PNKCR_HUMAN	NK-TUMOR RECOGNITION PROTEIN (NATURAL-KILLER CELLS CYCLOPHILIN-)	187-214	448-475	559-599	701-742	816-843	1080-1133			
PNKGA_HUMAN	NKG2-A AND NKG2-B TYPE II INTEGRAL MEMBRANE PROTEINS.	28-55								
PNOS1_HUMAN	NITRIC-OXIDE SYNTHASE, BRAIN (EC 1.14.13.39) (NOS, TYPE I).	389-416								
PNOS3_HUMAN	NITRIC-OXIDE SYNTHASE, ENDOTHELIAL (EC 1.14.13.39) (EC-NOS) (NOS,	389-416	1116-1146	1292-1319						
PNIG1_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT GABA TRANSPORTER 1.	131-158								
PNIR_HUMAN	NEUROTENSIN RECEPTOR (NT-R).	57-84								
PNISE_HUMAN	SODIUM-DEPENDENT SEROTONIN TRANSPORTER (SHT TRANSPORTER) (SHTT).	71-98								
PNITTA_HUMAN	SODIUM- AND CHLORIDE-DEPENDENT TAURINE TRANSPORTER.	120-147								
PNJ2M_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 2 (EC 1.6.5.3).	202-240								
PNJ4M_HUMAN	NADH-UBIQUINONE OXIDOREDUCTASE CHAIN 4 (EC 1.6.5.3).	164-191	372-399							
PNJBN_HUMAN	NUCLEOBINDIN PRECURSOR.	46-73	360-387							
PNJCL_HUMAN	NUCLEOLIN (PROTEIN C23).	462-508								
PNY3R_HUMAN	PUTATIVE NEUROPEPTIDE Y RECEPTOR TYPE 3 (NPY3-R) (FB22) (NPYRL).	115-142								
POAT_HUMAN	ORNITHINE AMINOTRANSFERASE PRECURSOR (EC 2.6.1.13) (ORNITHINE- α -OXI).	96-128								
POCJA_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 3A (OCT-3A).	139-173								
POCJB_HUMAN	OCTAMER-BINDING TRANSCRIPTION FACTOR 3B (OCT-3B).	37-78								
POCRL_HUMAN	LOWE'S OCULOCECEREBRORENAL SYNDROME PROTEIN.	704-735								
PODB2_HUMAN	LIPOLAMIDE ACTYLTRANSFERASE COMPONENT (E2) PRECURSOR OF BRANCHED-CHA	100-127	375-402							
PODP2_HUMAN	DIHYDROLIPOAMIDE ACETYLTRANSFERASE COMPONENT (E2) OF PYRUVATE	72-99								
POMGP_HUMAN	OLIGODENDROCYTE-MYELIN GLYCOPROTEIN PRECURSOR (OMG).	51-80								
POPSB_HUMAN	BLUE-SENSITIVE OPSIN (BLUE CONE PHOTORECEPTOR PIGMENT).	220-247								
POPSG_HUMAN	GREEN-SENSITIVE OPSIN (GREEN CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POPSR_HUMAN	RED-SENSITIVE OPSIN (RED CONE PHOTORECEPTOR PIGMENT).	90-117	239-266							
POSTP_HUMAN	OSTEOPONTIN PRECURSOR (BONE SIALOPROTEIN 1) (URINARY STONE PROTEIN)	239-266								
POTC_HUMAN	ORNITHINE CARBAMOYLTRANSFERASE PRECURSOR (EC 2.1.3.3).	170-204								
POTNC_HUMAN	OSTEONECTIN PRECURSOR (BASEMENT MEMBRANE PROTEIN BM-40).	173-207								
POXYB_HUMAN	OXYSTEROL-BINDING PROTEIN.	89-123	190-217	290-317	577-604					
POXYR_HUMAN	OXYTOCIN RECEPTOR (OT-R).	350-377								
PP107_HUMAN	RETINOBLASTOMA-ASSOCIATED PROTEIN-LIKE 107 KD HOMOLOG (P107)	159-186	422-449							
PP1DP_HUMAN	DNA POLYMERASE ALPHA HOLOENZYME-ASSOCIATED PROTEIN P1.	19-60	637-664							
PP47_HUMAN	PLECKSTRIN (P47).	298-325								
PP4HA_HUMAN	PROLYL 4-HYDROXYLASE ALPHA SUBUNIT PRECURSOR (EC 1.14.11.2).	29-69	191-218							
PP60_HUMAN	MITOCHONDRIAL MATRIX PROTEIN P1 PRECURSOR (P60 LYMPOCYTE PROTEIN)	72-99	271-298	361-407						
PPB5A_HUMAN	PHOSPHATIDYLINOSITOL 3-KINASE REGULATORY ALPHA SUBUNIT (PI3-KINASE	12-39	428-476	586-613	688-715					
PPAP1_HUMAN	PANCREATITIS ASSOCIATED PROTEIN 1 PRECURSOR.	71-104								
PPAX3_HUMAN	PAIRED BOX PROTEIN PAX-3 (B-CELL SPECIFIC TRANSCRIPTION FACTOR)	157-187								
PPDGA_HUMAN	PLATELET-DERIVED GROWTH FACTOR, A CHAIN PRECURSOR (PDGF A-CHAIN)	38-65								
PPEC1_HUMAN	PLATELET ENDOTHELIAL CELL ADHESION MOLECULE PRECURSOR (PECAM-1)	685-719								
PPENK_HUMAN	PROENKEPHALIN A PRECURSOR.	142-176								
PPERK_HUMAN	EOSINOPHIL PEROXIDASE PRECURSOR (EC 1.11.1.7) (EPO) (FRAGMENT).	308-335								
PPERF_HUMAN	PERFORIN 1 PRECURSOR (P1) (LYMPHOCYTE PORE FORMING PROTEIN) (PPF).	411-438								
PPFAL_HUMAN	PLATELET BASIC PROTEIN PRECURSOR (PBP) (CONTAINS: CONNECTIVE-TISSUE	21-55								
PPGCA_HUMAN	CARTILAGE-SPECIFIC PROTEOGLYCAN CORE PROTEIN PRECURSOR (CSGPC)	71-100								
PPGCS_HUMAN	LARGE FIBROBLAST PROTEOGLYCAN PRECURSOR (VERSICAN) (CHONDROITIN	64-98	1390-1417	1553-1580						
PPGDH_HUMAN	15-HYDROXYPROSTAGLANDIN DEHYDROGENASE (NAD ⁺) (EC 1.1.1.141) (PGDH).	87-118								
PPGDR_HUMAN	BETA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.112).	294-321	354-384	465-495						
PPGDS_HUMAN	ALPHA PLATELET-DERIVED GROWTH FACTOR RECEPTOR PRECURSOR	64-94	347-395	461-488	524-551	986-1058				
PPGHS_HUMAN	PROSTAGLANDIN G/H SYNTHASE PRECURSOR (EC 1.14.99.1) (CYCLOOXYGENASE)	331-358								
PPGSI_HUMAN	BONE/CARTILAGE PROTEOGLYCAN 1 PRECURSOR (BIGLYCAN) (PG-S1).	100-127								
PPH4H_HUMAN	PHENYLALANINE-4-HYDROXYLASE (EC 1.14.16.1) (PAH) (PHE-4-	239-266								
PPHB_HUMAN	PROHIBITIN	41-68								
PPHOS_HUMAN	PHOSDUIN (33 KD PHOTOTRANSDUCING PROTEIN) (MEKA PROTEIN).	184-225								
PPHS1_HUMAN	GLYCOCEN PHOSPHORYLASE, LIVER FORM (EC 2.4.1.1).	116-143								
PPHS2_HUMAN	GLYCOCEN PHOSPHORYLASE, MUSCLE FORM (EC 2.4.1.1).	532-559								
PPHS3_HUMAN	GLYCOCEN PHOSPHORYLASE, BRAIN FORM (EC 2.4.1.1).	533-560								
PPIP4_HUMAN	1-PHOSPHATIDYLINOSITOL-4-BISPHOSPHATE PHOSPHODIESTERASE BETA 2	908-935								

PCGENE	10717844 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PP13_HUMAN	1-PHOSPHATIDYLINOSITOL-4,5-BISPHOSPHATE PHOSPHODIESTERASE GAMMA 2	142-169	239-266							
PLA2L_HUMAN	PLA2GLOMERIN (DESMOPLAKIN III)	373-400								
PPLSL_HUMAN	L-PLASTIN (FIMBRIN)	507-534								
PPLST_HUMAN	T-PLASTIN (FIMBRIN)	510-561								
PPM22_HUMAN	PERIPHERAL MYELIN PROTEIN 22 (PMP-22)	3-33								
PPM2B_HUMAN	PHOSPHOGLYCERATE MUTASE, BRAIN FORM (EC 5.4.2.1) (PGAM-B) (EC 5.4.2.4)	81-111								
PPMGM_HUMAN	PHOSPHOGLYCERATE MUTASE, MUSCLE FORM (EC 5.4.2.1) (PGAM-M)	81-115								
PPML1_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-1	551-585								
PPMLX_HUMAN	PROBABLE TRANSCRIPTION FACTOR PML-X	551-585								
PPMSC_HUMAN	AUTOANTIGEN PM-SCL	103-110								
PPPGA_HUMAN	DNA-BINDING PROTEIN PO-GA	14-51	182-209	610-637	667-699					
PPPOL1_HUMAN	RETROVIRUS-RELATED POL YPO PROTEIN (REVERSE TRANSCRIPTASE)	774-804								
PPPOL2_HUMAN	RETROVIRUS-RELATED POL YPO PROTEIN (FRAGMENT)	78-138	171-205							
PPPOL3_HUMAN	OUTER MITOCHONDRIAL MEMBRANE PROTEIN PORIN (VOLTAGE-DEPENDENT ANION)	33-76	189-216							
PPPPAP_HUMAN	PROSTATIC ACID PHOSPHATASE PRECURSOR (EC 3.1.1.2)	235-269								
PPPPAS_HUMAN	RED CELL ACID PHOSPHATASE 1, ISOZYME S (EC 3.1.1.3) (ACP1)	26-53								
PPPPOL_HUMAN	NAD(+) ADP-RIBOSYLTRANSFERASE (EC 2.4.2.30) (POLY (ADP-RIBOSE))	699-729	972-1003							
PPPC3_HUMAN	PROTEASOME COMPONENT C3 (EC 3.4.99.46) (MACROPAIN SUBUNIT C3)	19-46								
PPPC3_HUMAN	PROTEASOME COMPONENT C3 (EC 3.4.99.46) (MACROPAIN SUBUNIT C3)	34-61								
PPPC9_HUMAN	PROTEASOME COMPONENT C9 (EC 3.4.99.46) (MACROPAIN SUBUNIT C9)	203-261								
PPPRG_HUMAN	PROGESTERONE RECEPTOR (PR) (FORMS A AND B)	846-890								
PPPTS_HUMAN	VITAMIN K-DEPENDENT PROTEIN S (BLOOD CLOTTING) PRECURSOR	337-371								
PPPTZ_HUMAN	VITAMIN K-DEPENDENT PROTEIN Z PRECURSOR	29-56								
PPSOR_HUMAN	PSORIASIN	65-92								
PPSPD_HUMAN	PULMONARY SURFACTANT-ASSOCIATED PROTEIN D PRECURSOR (PSP-D) (SP-D)	224-251								
PPPTHY_HUMAN	PARATHYROID HORMONE PRECURSOR (PARATHYRIN)	86-113								
PPPTN1_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1B (EC 3.1.1.3.48) (PTP-1B)	136-177								
PPPTN2_HUMAN	T-CELL PROTEIN-TYROSINE PHOSPHATASE (EC 3.1.1.3.48) (TCPTP)	59-86	138-178							
PPPTN6_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 1C (EC 3.1.1.3.48) (PTP-1C) (HEMATOPOIETIC)	227-261	512-580							
PPPTN8_HUMAN	PROTEIN-TYROSINE PHOSPHATASE 2C (EC 3.1.1.3.48) (PTP-2C) (PTP-1D)	41-68	218-245							
PPPTN8_HUMAN	PROTEIN-TYROSINE PHOSPHATASE G1 (EC 3.1.1.3.48) (PTPG1)	618-645	695-722							
PPPTK_HUMAN	PARATHYROID HORMONE/PARATHYROID HORMONE-RELATED PEPTIDE	368-395								
PPPTX_HUMAN	PENTAXIN-RELATED PROTEIN PTX3 PRECURSOR	74-101								
PPPUR2_HUMAN	PHOSPHORIBOSYLAMINE-GLYCINE LIGASE (EC 6.3.4.13) (GARS) (GLYCINAMIDE)	803-830								
PPUR6_HUMAN	MULTIFUNCTIONAL PROTEIN ADE2H1 (PHOSPHORIBOSYLAMINOIMIDAZOLE-)	391-418								
PPUR8_HUMAN	ADENYLOSUCCINATE LYASE (EC 4.3.2.3) (ADENYLOSUCCINASE) (ASL)	204-231								
PPYRS_HUMAN	URIDINE 5'-MONOPHOSPHATE SYNTHASE (UMP SYNTHASE) (OROTATE)	120-150								
PPYRG_HUMAN	CTP SYNTHASE (EC 6.3.4.2) (UTP-AMMONIA LIGASE) (CTP SYNTHETASE)	86-113	300-334							
PPZP_HUMAN	PREGNANCY ZONE PROTEIN PRECURSOR	315-354	990-1024	1162-1189	1405-1432					
PRAT4_HUMAN	TRANSCRIPTION FACTOR TIF, ALPHA SUBUNIT (TFIIF, ALPHA SUBUNIT)	474-501								
PRAB4_HUMAN	RAS-RELATED PROTEIN RAB-4	38-65								
PRAB6_HUMAN	RAS-RELATED PROTEIN RAB-6	123-150								
PRADI_HUMAN	RADIOLIN	308-335	414-463	510-537						
PRB11_HUMAN	RAS-RELATED PROTEIN RAB-11 (24KG) (YLR)	151-178								
PRBB3_HUMAN	RETINOBLASTOMA BINDING PROTEIN 3 (RBBP-3) (PRB-BINDING PROTEIN E2F-1)	129-156	161-223							
PRDP_HUMAN	RD PROTEIN	9-53								
PREN1_HUMAN	RENIN PRECURSOR, RENAL (EC 3.4.23.15) (ANGIOTENSINOGENASE)	136-163								
PREST_HUMAN	RESTIN (CYTOPLASMIC LINKER PROTEIN-170 ALPHA-2) (CLIP-170)	190-217	333-370	445-472	571-619	744-771	784-852	1023-1050	1088-1139	1157-1184
PRFAL_HUMAN	REPLICATION PROTEIN A 70 KD DNA-BINDING SUBUNIT (RP-A) (RF-A)	1216-1306								
PRFP_HUMAN	TRANSFORMING PROTEIN (RFP) (RET FINGER PROTEIN)	208-235	425-455							
PRH_HUMAN	BLOOD GROUP RH(D) POLYPEPTIDE	183-217								
PRIB1_HUMAN	RIBOPHORIN I PRECURSOR	161-188								
PRIB2_HUMAN	RIBOPHORIN II PRECURSOR	81-108	496-530							
PRIB1_HUMAN	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE M1 CHAIN (EC 1.1.7.4.1)	142-172	361-388							
PRL22_HUMAN	60S RIBOSOMAL PROTEIN L22 (EPSTEIN-BARR VIRUS SMALL RNA ASSOCIATED)	42-69	370-400							
PRL26_HUMAN	60S RIBOSOMAL PROTEIN L26	78-112								
		55-89	103-137							

PCGENE	1071178x4 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PRL9_HUMAN	60S RIBOSOMAL PROTEIN L9	146-192								
PRLA0_HUMAN	60S ACIDIC RIBOSOMAL PROTEIN P0 (L10E)	138-165								
PRO3_HUMAN	52 KD RO PROTEIN (SIOGREN SYNDROME TYPE A ANTIGEN (SS-A))	190-235	218-265							
PRO6_HUMAN	60 KD RO PROTEIN (SIOGREN SYNDROME TYPE A ANTIGEN (SS-A))	192-245								
PROG_HUMAN	HETEROGENEOUS NUCLEAR RIBONUCLEOPROTEIN C1/C2 (HNRNP C1 AND HNRNP C2)	16-43								
PROL_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN L (HRNP L)	501-528								
PROU_HUMAN	HETEROGENEOUS RIBONUCLEOPROTEIN U	630-657								
PRPB1_HUMAN	DNA-DIRECTED RNA POLYMERASE II 215 KD POLYPEPTIDE	269-296	665-720	879-906	1314-1341	1371-1398				
PRPB2_HUMAN	DNA-DIRECTED RNA POLYMERASE II 140 KD POLYPEPTIDE	626-667	1008-1035							
PRPB3_HUMAN	DNA-DIRECTED RNA POLYMERASE II 33 KD POLYPEPTIDE	242-274								
PRPXA_HUMAN	RETINOIC ACID RECEPTOR RXR-ALPHA	318-352								
PRRXC_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 1	376-403								
PRRXC_HUMAN	RETINOIC ACID RECEPTOR RXR-BETA ISOFORM 2	396-423								
PRSL16_HUMAN	40S RIBOSOMAL PROTEIN S16	60-87								
PRSL16_HUMAN	40S RIBOSOMAL PROTEIN S16	80-116								
PRSL35_HUMAN	40S RIBOSOMAL PROTEIN S35	26-53								
PRSL35_HUMAN	40S RIBOSOMAL PROTEIN S35	14-41								
PRSL7_HUMAN	40S RIBOSOMAL PROTEIN S7 (S8)	73-100								
PRSL8_HUMAN	40S RIBOSOMAL PROTEIN S8	136-163								
PRSL1_HUMAN	RAS-LIKE PROTEIN TC1	123-150								
PRSLA_HUMAN	U1 SMALL NUCLEAR RIBONUCLEOPROTEIN A (U1 SNRNP A PROTEIN)	13-47								
PRSLB_HUMAN	U2 SMALL NUCLEAR RIBONUCLEOPROTEIN B	17-44								
PRSLN_HUMAN	RYANODINE RECEPTOR, SKELETAL MUSCLE	154-188	495-522	866-893	2750-2777	2820-2847	3104-3131	3529-3556	3912-3919	4921-4948
PS10A_HUMAN	S-100 PROTEIN, ALPHA CHAIN	12-54								
PS10B_HUMAN	S-100 PROTEIN, BETA CHAIN	14-56								
PS10D_HUMAN	S-100D PROTEIN	31-58								
PSAHH_HUMAN	ADENOSYLHOMOCYSTEINASE (EC 3.1.1.1) (S-ADENOSYL-L-HOMOCYSTEINE)	389-416								
PSATI_HUMAN	DNA-BINDING PROTEIN SAT1	709-736								
PSCCA_HUMAN	SQUAMOUS CELL CARCINOMA ANTIGEN (SCCA) (PROTEIN T4-A)	78-105								
PSCF_HUMAN	STEM CELL FACTOR PRECURSOR (SCF)	74-101								
PSEMI_HUMAN	SEMNOCHELIN I PROTEIN PRECURSOR (SGI) (CONTAINS: SEMINAL BASIC)	64-98	176-226	288-329	334-368					
PSMG2_HUMAN	SEMNOCHELIN II PRECURSOR (SGII)	71-98	183-226	304-355	405-439	539-575				
PSMT_HUMAN	SET PROTEIN	38-65	154-181							
PSGI_HUMAN	SECRETOGRAFIN I PRECURSOR (CHROMOGRANIN B)	144-178								
PSG2_HUMAN	SECRETOGRAFIN II PRECURSOR (CHROMOGRANIN C)	254-281	290-317	534-561						
PSIAL_HUMAN	BONE SIALOPROTEIN II PRECURSOR (BSP II)	84-113	155-193	256-283						
PSNL_HUMAN	POSSIBLE GLOBAL TRANSCRIPTION ACTIVATOR SNE2L	231-258	545-572							
PSNOB_HUMAN	SKI-RELATED ONCOGENE SNON	414-441								
PSPCA_HUMAN	SPECTRIN ALPHA CHAIN	193-220	570-621	655-712	1099-1126	1461-1502	1882-1909	1988-2022	2120-2154	2223-2250
PSPCB_HUMAN	SPECTRIN BETA CHAIN, ERYTHROCYTE	2346-2373								
PSPRE_HUMAN	SEPIAEPIN REDUCTASE (EC 1.1.1.15) (SPR)	150-177	316-350	486-520	648-675	987-1021	1027-1083	1287-1324	1347-1374	1834-1861
PSRF_HUMAN	SERUM RESPONSE FACTOR (SRF)	90-124								
PSRPF_HUMAN	SIGNAL RECOGNITION PARTICLE RECEPTOR ALPHA SUBUNIT (SR-ALPHA)	77-104	480-507							
PSRRI_HUMAN	SOMATOSTATIN RECEPTOR TYPE 1	76-110								
PSSTM_HUMAN	STATHMIN (PHOSPHOPROTEIN P19) (ONCOPROTEIN P18) (LEUKEMIA-ASSOCIATED)	289-316								
PSUIS_HUMAN	SUCRASE-ISOMALTAZE, INTESTINAL (EC 3.2.1.48) (EC 3.2.1.10)	47-74								
PSYB1_HUMAN	SYNAPTOSOMAL TASE, INTESTINAL (EC 3.2.1.48) (EC 3.2.1.10)	1748-1775								
PSYB1_HUMAN	SYNAPTOSOMAL TASE, INTESTINAL (EC 3.2.1.48) (EC 3.2.1.10)	31-67								
PSYD2_HUMAN	ASPARTYL-TRNA SYNTHETASE ALPHA-2 SUBUNIT (EC 6.1.1.12) (ASPARTATE-TRNA)	44-71								
PSYEP_HUMAN	MULTIFUNCTIONAL AMINOACYL-TRNA SYNTHETASE (CONTAINS: GLUTAMYL-TRN)	174-201	740-771							
PSYH_HUMAN	HISTIDYL-TRNA SYNTHETASE (EC 6.1.1.21) (HISTIDINE-TRNA LIGASE)	380-442	468-502							
PSYTI_HUMAN	SYNAPTOTAGMIN I (PS5)	140-167	250-277							
PSYTC_HUMAN	THREONYL-TRNA SYNTHETASE, CYTOPLASMIC (EC 6.1.1.3) (THREONINE-TRNA)	497-524	658-685							
PSYV_HUMAN	VALYL-TRNA SYNTHETASE (EC 6.1.1.9) (VALINE-TRNA LIGASE) (VALRS)	230-257	413-440							
PSYW_HUMAN	TRYPTOPHAN-TRNA SYNTHETASE (EC 6.1.1.2) (TRYPTOPHAN-TRNA LIGASE)	93-127	196-223							
PTIEB_HUMAN	TRANSCRIPTION INITIATION FACTOR IIE-BETA CHAIN (TFIIE-BETA)	34-68								
PTAP4_HUMAN	TRANSCRIPTION FACTOR AP-4 (FRAGMENT)	169-196	245-272							

PCGENE	1071178.4 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN									
PTAPB_HUMAN	TRANSCRIPTION FACTOR JUN-B	296-322								
PTAPD_HUMAN	TRANSCRIPTION FACTOR JUN-D	291-333								
PTAU1_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU	278-305								
PTAU2_HUMAN	MICROTUBULE-ASSOCIATED PROTEIN TAU, FETAL	211-238								
PTC01_HUMAN	TRANSCOBALAMIN PRECURSOR	201-241	330-337							
PTCP1_HUMAN	T-COMPLEX PROTEIN 1 (TCP-1)	316-343								
PTDT_HUMAN	DNA NUCLEOTIDYLTRANSFERASE (EC 2.7.7.1) (TERMINAL ADDITION ENZYME)	61-95								
PTDK_HUMAN	RECEPTOR TYROSINE KINASE TEK PRECURSOR (EC 2.7.1.12) (ITPK-6)	644-678	969-996	1007-1016						
PTF2B_HUMAN	TRANSCRIPTION INITIATION FACTOR IIB (TFIIB)	135-162								
PTFEB_HUMAN	TRANSCRIPTION FACTOR E1 (FRAGMENT)	43-70	122-149	178-226						
PTFES_HUMAN	TRANSCRIPTION ELONGATION FACTOR S-II	29-56								
PTF_HUMAN	TISSUE FACTOR PRECURSOR (TF) (COAGULATION FACTOR III)	148-175								
PTGFI_HUMAN	TRANSFORMING GROWTH FACTOR BETA 1 PRECURSOR (TGF-BETA 1)	148-185								
PTGF2_HUMAN	TRANSFORMING GROWTH FACTOR BETA 2 PRECURSOR (TGF-BETA 2) (GLI03ILASTO)	243-270								
PTGFA_HUMAN	TRANSFORMING GROWTH FACTOR ALPHA PRECURSOR (TGF-ALPHA) (EGF-LIKE TOH)	87-114								
PTGLK_HUMAN	PROTEIN-GLUTAMINE GAMMA-GLUTAMYLTRANSFERASE K (EC 2.3.2.13)	258-285								
PTHBS_HUMAN	THROMBOSPONDIN PRECURSOR	110-165	284-314							
PTHK_HUMAN	3-KETOACYL-COA THIOLASE PEROXISOMAL PRECURSOR (EC 2.3.1.16) (BETA-)	185-212								
PTKRB_HUMAN	PROTACHYKININ BETA PRECURSOR (CONTAINS: SUBSTANCE P, NEUROKININ A)	11-38								
PTLE1_HUMAN	TRANSUDIN-LIKE ENHANCER PROTEIN 1	628-653								
PTLE2_HUMAN	TRANSUDIN-LIKE ENHANCER PROTEIN 2	94-125								
PTLE4_HUMAN	TRANSUDIN-LIKE ENHANCER PROTEIN 4 (FRAGMENT)	304-331								
PTOPA_HUMAN	DNA TOPOISOMERASE II ALPHA ISOZYME (EC 5.99.1.3)	19-46	503-532							
PTOPB_HUMAN	DNA TOPOISOMERASE II BETA ISOZYME (EC 5.99.1.3)	35-65	616-647							
PTPM3_HUMAN	TROPOMYOSIN, FIBROBLAST ISOFORM TM3	16-74	82-116							
PTPMA_HUMAN	TROPOMYOSIN ALPHA CHAIN, SKELETAL MUSCLE	16-43	47-74	82-116	147-174	191-237	243-277			
PTPMB_HUMAN	TROPOMYOSIN BETA CHAIN, SKELETAL MUSCLE	37-116	193-240							
PTPMC_HUMAN	TROPOMYOSIN ALPHA CHAIN, CARDIAC MUSCLE	16-74	82-116	193-277						
PTPMF_HUMAN	TROPOMYOSIN, FIBROBLAST AND EPITHELIAL MUSCLE-TYPE (TM16) (TIME1)	37-116	210-240	243-270						
PTPMG_HUMAN	TROPOMYOSIN, FIBROBLAST NON-MUSCLE TYPE (TM10PL)	46-80	111-138	158-199	207-234					
PTPMI_HUMAN	TROPOMYOSIN, CYTOSKELETAL TYPE (TM10NM)	46-80	111-138	172-199						
PTPMS_HUMAN	TROPOMYOSIN ALPHA CHAIN, SMOOTH MUSCLE (FRAGMENT)	25-59	147-178							
PTPP2_HUMAN	TRIPETIDYL-PEPTIDASE II (EC 3.4.14.10) (TPP II) (TRIPETIDYL)	153-187	1004-1031	1160-1187						
PTPR_HUMAN	TPR ONCOGENE (FRAGMENT)	82-147								
PTRJ6_HUMAN	TREB16 PROTEIN	18-45	242-269							
PTRR_HUMAN	THYROTROPIN-RELEASING HORMONE RECEPTOR (TRH-R) (THYROLIBERIN)	349-383								
PTRIC_HUMAN	TROPONIN I, CARDIAC MUSCLE	36-63								
PTRKA_HUMAN	HIGH AFFINITY NERVE GROWTH FACTOR RECEPTOR PRECURSOR (EC 2.7.1.12)	86-93	117-148							
PTRSR_HUMAN	TRANSFERRIN RECEPTOR PROTEIN (TR) (ANTIGEN CD71) (TY)	188-215	366-393							
PTSHR_HUMAN	THYROTROPIN RECEPTOR PRECURSOR (TSH-R)	87-117	420-447							
PTTK_HUMAN	PROTEIN KINASE TKK (EC 2.7.1.-)	170-197	324-359	510-544	549-583					
PTTK2_HUMAN	NON-RECEPTOR TYROSINE-PROTEIN KINASE TYK2 (EC 2.7.1.12)	150-177								
PUBA1_HUMAN	UBIQUITIN-ACTIVATING ENZYME E1 (A159 PROTEIN)	448-475								
PUBF1_HUMAN	NUCLEOLAR TRANSCRIPTION FACTOR 1 (UPSTREAM BINDING FACTOR 1) (UBF-1)	227-254								
PUDP9_HUMAN	UDP-GLUCURONOSYLTRANSFERASE PRECURSOR, MICROSMAL (EC 2.4.1.17)	227-254								
PUDF_HUMAN	RECEPTOR TYROSINE-PROTEIN KINASE UFO PRECURSOR (EC 2.7.1.12)	488-522								
PUSF1_HUMAN	UPSTREAM STIMULATORY FACTOR 1	251-295								
PVATC_HUMAN	VACUOLAR ATP SYNTHASE SUBUNIT C (EC 3.6.1.34) (V-ATPASE C SUBUNIT)	47-74	117-147							
PVIL1_HUMAN	VILLIN	318-372	427-461	717-744						
PVIME_HUMAN	VIMENTIN	119-146	233-260							
PVINC_HUMAN	VINCULIN	108-135								
PVPRT_HUMAN	RETROVIRUS-RELATED PROTEASE (EC 3.4.23.-)	95-134								
PWEET_HUMAN	WEEL-LIKE PROTEIN KINASE (EC 2.7.1.12)	354-388								
PWT1_HUMAN	WILMS' TUMOR PROTEIN (WT33)	247-274								
PXBPI_HUMAN	X BOX BINDING PROTEIN-1 (XBP-1) (TREB5 PROTEIN)	97-135								
PXPAC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-A CELLS (XERODERMA PIGMENTOSUM)	180-211								
PXPCC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-C CELLS (XERODERMA PIGMENTOSUM)	134-168	701-728							

PCGENE	107178.4 Motif Search on All Human Protein Sequences	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTIN	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PXPDC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-D CELLS (XERODERMA PIGMENTOSUM)	264-291								
PXPCC_HUMAN	DNA-REPAIR PROTEIN COMPLEMENTING XP-G CELLS (XERODERMA PIGMENTOSUM)	81-110	715-766	1047-1081						
PXRCC_HUMAN	DNA-REPAIR PROTEIN XRCC1	23-57								
PZNI0_HUMAN	ZINC FINGER PROTEIN 10 (ZINC FINGER PROTEIN KOX1) (FRAGMENT)	29-56								
PZNI0_HUMAN	ZINC FINGER PROTEIN 40 (HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 ENTIANCIR-)	17-62	307-334	1071-1098	1469-1500	2013-2057	2146-2180			
PZNI43_HUMAN	ZINC FINGER PROTEIN 43 (BRC1744) (FRAGMENT)	3-30	201-228							
PZNI46_HUMAN	ZINC FINGER PROTEIN 46 (ZINC FINGER PROTEIN KUP)	121-149								

T, 230

TABLE X

Search Results Summary for PCTLZIP,
P1CTLZIP, and P2CTLZIP Motifs

PCTLZIP	P1CTLZIP	P2CTLZIP							
LIBRARY FILE	LIBRARY FILE	LIBRARY FILE							
PENV FOAMV	PENV BRV08	PENV BRV08	434-450					525-542	
PENV HV1MA	PENV BRV27	PENV BRV27	463-478					564-571	
PENV HV1MP	PENV FOAMV	PENV FENV1	481-496	864-880				30-47	830-847
PENV HV1RH	PENV HV1KB	PENV FIVE	752-768					781-788	
PENV HV18C	PENV HV1MA	PENV FV8D	437-453					779-786	
PENV HV122	PENV HV1MP	PENV FV72	183-198					780-787	
PENV HV12H	PENV HV1RH	PENV FV7C6	444-460					38-55	824-841
PENV HV2BE	PENV HV181	PENV FLVGL	738-764					605-622	
PENV HV2D1	PENV HV18C	PENV FLV18	186-201					825-842	
PENV HV2G1	PENV HV122	PENV FLVBA	123-138					602-618	
PENV HV2N2	PENV HV123	PENV FOAMV	117-133					710-727	857-874
PENV HV2RO	PENV HV12H	PENV F8VGA	437-453					825-842	
PENV HV288	PENV HV2BE	PENV F8VGB	750-766					605-622	
PENV HV28T	PENV HV2D1	PENV F8V8M	741-756					609-625	
PENV J8RV	PENV HV2G1	PENV HV10Y	741-756					123-140	
PENV MMTVB	PENV HV2N2	PENV HV122	742-757					410-427	
PENV MMTVG	PENV HV2RO	PENV HV123	751-766					154-171	
PENV 8V8NK	PENV HV288	PENV HV2CA	743-758					750-767	
PENV 8V8ML	PENV HV28T	PENV MCFE	748-760					600-617	
PENMA CV8LY	PENV J8RV	PENV MCFE3	104-119	541-557				601-618	
PENMA CV8M	PENV MCFE	PENV MLVAV	387-413					630-647	
PENMA CV8Q	PENV MCFE3	PENV MLVCB	387-413					625-642	
PENMA CVHOC	PENV MLVAV	PENV MLVF5	427-443					639-656	
PENMA CVMA5	PENV MLVCB	PENV MLVFF	422-438					639-656	
PENMA CVMS	PENV MLVHO	PENV MLVFP	423-438					639-656	
PENMA INBAA	PENV MLVHO	PENV MLVHO	428-442					626-643	
PENMA INBBE	PENV MLVMO	PENV MLVKI	428-442					167-184	
PENMA INBBO	PENV MLVRD	PENV MLVMO	424-440					628-646	
PENMA INBEN	PENV MLVRK	PENV MLVRD	424-440					624-641	
PENMA INBFJ	PENV MMTVB	PENV MLVRK	618-633					624-641	
PENMA INBOL	PENV MMTVG	PENV MLVRK	618-633					170-197	
PENMA INBK	PENV 8FV1	PENV MBVFB	604-690					603-620	
PENMA INBIB	PENV 8FV3L	PENV RMCEV	861-877					710-727	957-974
PENMA INBID	PENV 8VQB	PENV 8FV1	93-108					707-724	954-971
PENMA INBLE	PENV 8V8K	PENV 8FV3L	139-154	802-818				766-783	
PENMA INBMD	PENV 8V8ML	PENV 8V8K	139-154	801-817				766-782	
PENMA INBME	PENV 8V84	PENV 8V8K	808-822					764-781	
PENMA INBNA	PENV 8V8P	PENV 8V84	810-826					769-786	
PENMA INBOR	PENMA CV8Q	PENV 8V84	36-52					773-790	
PENMA INB81	PENMA CV8LY	PENV 8V8P	391-406					530-553	
PENMA INB8J	PENMA CV8M	PENV 8V8P	391-406					42-58	200-217
PENMA INB8S	PENMA CV8Q	PENV 8V8P	391-406					36-53	
PENMA INBVI	PENMA CVHOC	PENV 8V8P	391-406					391-408	
PENMA INBVK	PENMA CVMA5	PENV 8V8P	402-417					391-408	
PENMA INBYB	PENMA CV8B	PENV 8V8P	403-418					391-408	
	PENMA IAAIC	PENV 8V8P	237-253						

PHEMA MUMPM	133-148	PHEMA IABAN	221-237	PHEMA CVHOC	391-408
PHEMA MUMPR	133-148	PHEMA IABUD	234-260	PHEMA IAAIC	322-338
PHEMA MUMPS	133-148	PHEMA IACKA	234-260	PHEMA IABAN	308-323
PHEMA P11HW	345-360	PHEMA IACKG	231-247	PHEMA IABUD	320-337
PHEMA P12H	65-80	PHEMA IACKV	230-246	PHEMA IACKA	320-337
PHEMA P12HT	66-80	PHEMA IADA1	234-260	PHEMA IACKG	316-333
PHEMA RINDK	368-383	PHEMA IADA3	237-263	PHEMA IACKP	302-318
PHEMA SVS	7-94	PHEMA IADCC	234-260	PHEMA IACKQ	302-318
PHEMA SVSCM	7-94	PHEMA IADH1	221-237	PHEMA IACKS	318-338
PHEMA SVSCP	7-94	PHEMA IADH2	221-237	PHEMA IACKV	315-332
PHEMA SVSLN	7-94	PHEMA IADH3	221-237	PHEMA IADA1	320-337
PVERN DVH1	42-67	PHEMA IADH4	221-237	PHEMA IADA3	322-338
PVFP7 CAPVK	89-104	PHEMA IADH6	221-237	PHEMA IADCC	320-337
PVFS8 VACC8	72-87	PHEMA IADH6	221-237	PHEMA IADH1	308-323
PVG01 BPP22	242-267	PHEMA IADH7	221-237	PHEMA IADH2	306-323
PVG01 HBVEB	169-184	PHEMA IADM2	237-263	PHEMA IADH3	306-323
PVG01 HGV11	210-225	PHEMA IADNZ	234-260	PHEMA IADH4	306-323
PVG06 BPT4	184-198	PHEMA IAE6	221-237	PHEMA IADH6	306-323
PVG07 BPT4	886-900	PHEMA IAE7	237-263	PHEMA IADH7	306-323
PVG08 HBV11	134-149	PHEMA IAFPR	230-246	PHEMA IADM2	322-338
PVG10 BPPH2	183-198	PHEMA IAHAL	236-262	PHEMA IADNZ	320-337
PVG10 BPPZA	183-198	PHEMA IAHAR	236-261	PHEMA IADU3	322-338
PVG10 HBV8A	109-124	PHEMA IAH8	230-246	PHEMA IAE6	306-323
PVG16 BPP1	81-88	PHEMA IAH7	230-246	PHEMA IAE7	322-338
PVG18 BPT4	468-483	PHEMA IAHCD	230-246	PHEMA IAFPR	316-332
PVG25 BPT4	87-112	PHEMA IAHDE	230-246	PHEMA IAGRE	320-337
PVG28 HBV11	20-36	PHEMA IAHFO	236-262	PHEMA IAGU2	320-337
PVG30 BPPH8	11-84	PHEMA IAHK6	236-262	PHEMA IAGUA	318-336
PVG36 BPOX2	22-37	PHEMA IAHK7	236-262	PHEMA IAHAL	321-338
PVG36 HBV8A	109-123	PHEMA IAHLE	230-246	PHEMA IAH8	315-332
PVG37 BPT2	1253-1268	PHEMA IAHLO	230-246	PHEMA IAH7	315-332
PVG37 HBV11	284-298	PHEMA IAHMI	236-262	PHEMA IAHCD	315-332
PVG65 HBV11	22-37	PHEMA IAHNM	236-262	PHEMA IAHDE	315-332
PVG66 HBV11	288-293	PHEMA IAHRO	236-262	PHEMA IAHFO	321-338
PVG68 HBV11	102-117	PHEMA IAH8A	236-262	PHEMA IAHK6	321-338
PVG69 HBV11	267-282	PHEMA IAH8P	230-246	PHEMA IAHK7	321-338
PVG69 HBV11	518-533	PHEMA IAH8W	230-246	PHEMA IAHLE	315-332
PVG8 BPPH2	234-248	PHEMA IAHTE	236-262	PHEMA IAHLO	315-332
PVG8 BPPZA	234-248	PHEMA IAHTO	236-262	PHEMA IAHMI	321-338
PVG8 BPV1R	67-72	PHEMA IAHUR	236-262	PHEMA IAHNM	321-338
PVGF BPPHX	234-248	PHEMA IAKIE	236-261	PHEMA IAHNN	815-332
PVGL2 CVBF	264-278	PHEMA IALEN	236-261	PHEMA IAHPR	315-332
PVGL2 CVBL9	264-278	PHEMA IALMAA	233-248	PHEMA IAHRO	321-338
PVGL2 CVBLY	264-278	PHEMA IAMAB	238-264	PHEMA IAH8A	321-338
PVGL2 CYBM	264-278	PHEMA IAMAO	237-263	PHEMA IAH8P	315-332
PVGL2 CVBQ	264-278	PHEMA IAME1	237-263	PHEMA IAH8W	315-332
PVGL2 CVBV	264-278	PHEMA IAME2	237-263	PHEMA IAHTE	321-338

PVMT2 IALE1	25-40	PHEMA P13B	324-340			PHEMA 8V41	85-102	
PVMT2 IALE2	25-40	PHEMA P13H4	324-340			PHEMA 8V5	84-101	
PVMT2 IAMAN	25-40	PHEMA P13HA	324-340			PHEMA 8V5CM	84-101	
PVMT2 IAPUE	25-40	PHEMA P13HT	324-340			PHEMA 8V5CP	84-101	
PVMT2 IASIN	25-40	PHEMA P13HU	324-340			PHEMA 8V5LN	84-101	
PVMT2 IAUDO	25-40	PHEMA P13HV	324-340			PVFO5 VACCC	280-297	
PVMT2 IAWIL	25-40	PHEMA P13HW	324-340			PVFO5 VACCP	280-297	
PVMT8 MYXVL	228-241	PHEMA P13HX	324-340			PVFO5 VACCV	281-298	
		PHEMA RINDK	308-383			PVFO8 VACCC	178-193	
		PHEMA 8V5	7-84			PVFO8 VACCV	176-183	
		PHEMA 8V5CM	7-84			PVQ27 H8V8A	208-228	
		PHEMA 8V5CP	7-84			PVQ28 H8V11	173-190	
		PHEMA 8V5LN	7-84			PVQ39 H8V11	848-885	
		PVENV DRV11	42-57			PVQ43 H8V11	108-128	521-538
		PVENV EAV	25-41			PVQ87 H8V11	171-188	
		PVFP2 FOWPV	88-104			PVQ72 H8V11	1252-1289	
		PVFP7 CAPVK	88-104			PVGF1 IBVB	3073-3080	
		PVJUS VACCB	72-87			PVGL2 IBVB	1084-1111	
		PVQ01 H8VB	168-184			PVGLB H8VE1	738-763	
		PVQ01 H8V11	208-225	317-332		PVGLB H8VE4	676-682	
		PVQ08 H8V11	134-149			PVGLB H8VEA	738-763	
		PVQ10 H8V8A	108-124			PVGLB H8VEB	738-763	
		PVQ11 H8V11	103-119			PVGLB H8VEL	738-763	
		PVQ12 H8V11	270-288			PVGLB ILTV8	587-614	
		PVQ1 8PV1R	76-92			PVGLB ILTV8	807-824	
		PVQ29 H8V11	20-35			PVGLB ILTVT	807-824	
		PVQ88 BPOX2	22-37			PVGLC PRVIF	180-197	
		PVQ36 H8V8A	108-123			PVGLE VZVD	488-488	
		PVQ37 H8V11	284-289			PVOLF 8V5	401-418	
		PVQ41 H8V11	244-260			PVQLH HCMVA	385-382	
		PVQ46 H8V11	1244-1260			PVQLH HCMVT	394-381	
		PVQ55 H8V11	22-37	143-158		PVQLH H8V11	245-282	803-820
		PVQ68 H8V11	208-283			PVQLH H8V1E	245-282	803-820
		PVQ68 H8V11	101-117			PVQLI H8V11	43-60	
		PVQ68 H8V9A	130-148	330-346		PVQLM BUNL7	81-88	
		PVQ69 H8V11	287-282			PVQLM BUN8H	81-88	
		PVQ65 H8V11	302-378	518-533		PVQLM PUUMH	712-729	
		PVQ71 H8V8A	88-105			PVQLM PUUMB	712-729	
		PVQ8 BPPH2	234-249			PVQLM RVFV	344-361	
		PVQ8 BPPZA	234-248			PVQLM RVFVZ	344-361	
		PVQ8 8PV1R	57-72			PVQLM LA98G	12-94	
		PVGF1 IBVB	2210-2228			PVQLY LA88J	12-94	
		PVGL2 CVBF	123-138	174-190	284-279	PVQLY LYCVA	12-94	
		PVGL2 CVBL9	123-138	174-190	284-279	PVQLY LYCVW	12-94	
		PVGL2 CVBLY	123-138	174-190	284-279	PVQLY MOPEI	12-94	
		PVGL2 CVBM	123-138	174-190	284-279	PVM1 REOVD	280-287	
		PVGL2 CVBQ	31-47	123-139	174-190	PVM1 REOVL	280-297	

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TABLE XI

Search Results Summary for P3CTLZIP, P4CTLZIP,
P5CTLZIP, and P6CTLZIP Motifs

P3CTLZIP	P4CTLZIP	P5CTLZIP	P6CTLZIP	P6CTLZIP	P6CTLZIP
LIBRARY FILE	LIBRARY FILE	LIBRARY FILE	LIBRARY FILE	LIBRARY FILE	LIBRARY FILE
PENV BIV27	PENV1 FRSFV	380-389	PENV1 FRSFV	380-400	PENV BIV28 47-88
PENV CAEVC	PENV AVIBU	88-117	PENV2 FRSFV	380-400	PENV BIV27 47-88
PENV CAEVC	PENV BIV27	147-186	PENV BAEVM	170-180	PENV FENV1 226-246
PENV HV28E	PENV HV12H	123-142	PENV FIVE	781-801	PENV FLVCL 824-845
PENV HV2D1	PENV HV2D2	8-29	PENV FIVSD	779-789	PENV FLVCL 447-488
PENV HV2G1	PENV HV28B	778-787	PENV FIVSD	780-800	PENV FLVCL 467-488
PENV HV2NZ	PENV JSRV	641-660	PENV FLVCL	8-29	PENV FLVCL 444-486
PENV HV2RO	PENV RSVF	533-552	PENV FOAMV	255-275	PENV FLVCL 153-174
PENV HV28B	PHEMA VACCC	173-192	PENV FSVGA	8-29	PENV FSVGA 467-488
PENV HV28T	PHEMA VACCI	173-192	PENV HV1C4	428-448	PENV FSVGB 447-488
PENV JSRV	PHEMA VACCT	173-192	PENV HV2CA	770-770	PENV FSVGM 450-471
PHEMA PIZH	PHEMA VACCV	173-192	PENV MLVFS	400-420	PENV FSVST 467-488
PHEMA PIZHT	PENV BEV	62-81	PENV MMTVB	843-863	PENV GALV 52-73
PHEMA SV41	PENV MCV1	61-80	PENV MMTVG	843-863	PENV HV28E 750-771
PENV THOGV	PENV MCV2	61-80	PENV OMVVS	75-95	PENV HV2G1 741-702
PVG18 BPP22	PVFLS ORFNZ	28-48	PENV RSVF	42-62	PENV HV2NZ 742-763
PVG24 BPT4	PVG01 HSEVB	169-188	PENV SFV1	824-844	PENV HV2RO 751-772
PVG38 HVSVA	PVG01 VACCC	376-385	PENV SFV3L	821-841	PENV HV28T 746-766
PVG40 HSV11	PVG01 VACCV	316-334	PENV SIVM1	786-786	PENV MCFE 600-821
PVG50 HVSVA	PVG01 VARV	376-385	PENV SIVMK	786-786	PENV MCFE3 601-822
PVG61 BPT4	PVG08 BPT4	827-848	PENV SIVML	784-784	PENV MLVAV 630-651
PVG51 HSV11	PVG10 HSV11	35-54	PENV SIVS4	788-789	PENV MLVCB 626-846
PVG55 HSV11	PVG11 HSV11	103-122	PENV SIVSP	773-783	PENV MLVFF 638-680
PVG61 IBVB	PVG1 BPPH2	31-60	PHEMA COVO	493-513	PENV MLVFF 638-680
PVG12 CVH22	PVG1 BPPH2	659-678	PHEMA CVBLV	381-411	PENV MLVFF 638-680
PVG12 IBVB	PVG20 BPT4	231-250	PHEMA CVBM	381-411	PENV MLVHO 628-847
PVG12 IBVB	PVG32 VZVD	90-109	PHEMA CVBQ	381-411	PENV MLVKI 167-188
PVG12 BVD2	PVG36 BPK3	132-161	PHEMA CVHOC	381-411	PENV MLVMO 629-650
PVG12 IBVK	PVG37 BPT2	19-38	PHEMA CVMA6	402-422	PENV MLVRD 624-846
PVG12 IBVM	PVG37 BPT4	19-38	PHEMA IACKG	81-101	PENV MLVRK 624-846
PVG18 HSB1	PVG39 HSV11	1038-1057	PHEMA IADMA	81-101	PENV MSVFB 170-181
PVG18 HSBVC	PVG41 HSV11	62-81	PHEMA MUMPM	387-417	PENV RMCV 603-824
PVG18 HSBVA	PVG43 BPPF3	380-399	PHEMA MUMPR	387-417	PENV SFV1 957-878
PVG18 LTV6	PVG48 BPPF1	337-356	PHEMA MUMPS	387-417	PENV SFV3L 157-178
PVG18 LTV8	PVG59 HSV11	142-161	PHEMA PHODV	493-513	PENV SIVA1 437-468
PVG18 LTVT	PVG61 HSV11	117-138	PHEMA P11HW	322-342	PENV SIVAG 442-483
PVG1C VZVD	PVG67 HSV11	318-337	PHEMA P12H	13-33	PENV SIVAI 421-442
PVG1C VZV8	PVG61 IBVB	1597-1606	PHEMA P12HT	13-33	PENV SIVAT 435-456
PVG1F P13H4	PVG12 CVBF	981-1010	PHEMA RINDL	497-517	PENV SM9AV 42-63
PVG1H HSB8Q	PVG12 CVBL8	981-1010	PHEMA SEND6	322-342	PHEMA CVMA6 402-423
PVG1H HSBV4	PVG12 CVBLV	981-1010	PHEMA SENDF	322-342	PHEMA IADE1 288-287
PVG1H HSBVB	PVG12 CVBM	981-1010	PHEMA SENDH	322-342	PHEMA MUMPM 226-246
PVG1 HSY11	PVG12 CVBQ	981-1010	PHEMA SENDJ	322-342	PHEMA MUMPR 226-246
PVG1M BIV	PVG12 CVBV	981-1010	PHEMA SENDZ	322-342	PHEMA MUMPS 226-246
PVM01 VACCC	PVG12 CVH22	789-787	PENV LEV	27-47	PHEMA PRODV 213-234

239

PVMO1_VACCV	83-101	128-144	PVGL2_CVMA4	999-1018	PVENV_THQGV	356-378	PIEMA_P12H	13-34
PVMO1_REOVD	227-245		PVGL2_CVMA6	847-868	PVG01_VACCC	288-318	PIEMA_P12HT	13-34
PVMO1_REOVL	227-245		PVGL2_CVMAJH	868-877	PVG01_VACCV	237-257	PIEMA_8V6	7-28
PVMAT_HRSVA	44-82		PVGL2_CVPF8	64-83	PVG01_VARV	288-318	PIEMA_8V5CM	7-28
PVMAT_NDVA	180-208		PVGL2_CVPPU	64-83	PVG08_VACCC	31-51	PIEMA_8V6CP	7-28
PVMAT_NDVB	180-208		PVGL2_CVPR8	814-833	PVG08_VARV	31-51	PIEMA_8V6LN	7-28
PVMAT_CAMVC	183-201		PVGL2_CVPRM	814-833	PVG08_BPPF1	25-45	PVG01_HSVB	169-180
PVMP_CAMVD	183-201		PVGL2_FIV	1041-1080	PVG12_HSV11	151-171	PVG01_HSV11	588-610
PVMP_CAMVE	183-201		PVGL2_IBV8	588-607	PVG22_HSV11	300-320	PVG23_HSV11	314-335
PVMP_CAMVN	183-201		PVGL2_IBVB	587-608	PVG38_HSV11	648-668	PVG37_BPOX2	65-88
PVMP_CAMV8	183-201		PVGL2_IBVD2	588-607	PVG61_HSV11	28-49	PVG43_HSV11	157-178
PVMP_CAMVW	183-201		PVGL2_IBVK	587-608	PVG83_HSV11	338-358	PVG55_HSV11	288-309
PVMP_FMVD	180-188		PVGL2_IBVM	587-608	PVG85_HSV11	117-137	PVG65_HSV8A	85-108
			PVGL8_HCMVA	708-726	PVG74_HSV8A	124-144	PVG58_HSV11	1165-1178
			PVGL8_HCMVT	707-728	PVGL2_IBV8	328-348	PVG58_HSV8A	268-287
			PVGL8_HSV8U	117-138	PVGL2_IBVB	327-347	PVG80_HSV11	30-51
			PVGL8_ILTV8	268-275	PVGL2_IBVD2	328-348	PVG63_HSV11	238-259
			PVGL8_ILTVS	268-285	PVGL2_IBVD3	328-348	PVG01_IBVB	185-187
			PVGL8_ILTVT	268-285	PVGL2_IBVK	327-347	PVG83_HCMVA	167-178
			PVGLC_HSV11	3-84	PVGL2_IBVM	327-347	PVGL2_CVBF	1259-1280
			PVGLC_HSV1K	3-84	PVGL2_IBYU2	310-330	PVGL2_CVBL8	1259-1280
			PVGLC_HSVBC	475-484	PVGL8_EBV	732-752	PVGL2_CVBLV	1259-1280
			PVGLQ_CHAV	438-455	PVGL8_HCMVA	760-770	PVGL2_CVBM	1259-1280
			PVGLQ_RABVH	372-391	PVGL8_HCMVT	761-771	PVGL2_CVBQ	1259-1280
			PVGLI_HSVB	44-83	PVGL8_HSV23	78-89	PVGL2_CVBV	1259-1280
			PVGLI_VZVD	278-297	PVGL8_HSV28	78-89	PVGL2_CVMA4	1317-1338
			PVGLM_BUNGE	117-138	PVGL8_HSV29	66-85	PVGL2_CVMA6	1286-1288
			PVGLM_PHV	152-171	PVGL8_HSV8U	72-82	PVGL2_CVMAJH	1178-1197
			PVGLM_PTPV	987-1016	PVGL8_HSV82	278-299	PVGL8_HSV11	83-104
			PVGLM_PUUMH	155-174	PVGL8_HSV8A	63-83	PVGL8_HSV1F	82-103
			PVGLM_PUUMS	155-174	PVGL8_MCMV8	738-758	PVGL8_HSV1K	82-103
			PVGLM_RV8V	830-848	PVGLF_P13H4	283-303	PVGL8_HSV1P	83-104
			PVGLM_RV8VZ	830-848	PVGLG_RABVE	454-474	PVGL8_MCMV9	135-158
			PVGLM_UUK	855-874	PVGLG_RABVH	454-474	PVGLC_PRVIF	448-467
			PVGLY_LYCVW	98-108	PVGLG_RABVP	454-474	PVGLF_CDVO	338-357
			PVGNB_CPMV	1185-1184	PVGLG_RABV8	454-474	PVGLF_MEASE	224-245
			PVM3_REOVD	521-540	PVGLG_RABVT	454-474	PVGLF_MEAS1	227-248
			PVME1_CVBM	171-180	PVGLH_MCMV8	670-680	PVGLF_MEASY	224-245
			PVME1_CVH22	136-155	PVGLM_BUNL7	1325-1345	PVGLF_MUMPM	448-467
			PVME1_CVPF8	174-193	PVGLM_BUNSH	1325-1345	PVGLF_MUMPR	448-467
			PVME1_CVPPU	174-193	PVGLM_BUNYW	988-1016	PVGLF_MUMPS	448-467
			PVME1_CVPRM	174-193	PVGLM_HANTB	988-1018	PVGLF_PHODV	308-328
			PVME1_CVTKE	171-180	PVGLM_HANTH	1000-1020	PVGLF_P11HC	458-477
					PVGLM_HANTL	1001-1021	PVGLF_P12H	450-471
					PVGLM_HANTV	1001-1021	PVGLF_P12HG	450-471
					PVGLM_RV8VZ	1158-1178	PVGLF_P12HT	450-471
					PVGLM_SEQUR	1000-1020	PVGLF_P13B	453-474

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TABLE XII

Search Results Summary for P7CTLZIP,
P8CTLZIP, and P9CTLZIP Motifs

P7CTLZIP	P8CTLZIP	P9CTLZIP							
LIBRARY FILE	LIBRARY FILE	LIBRARY FILE							
PENV BAEVM	PENV1 FR5FV	380-403						303-327	
PENV HV1B1	PENV2 FR5FV	380-403						303-327	
PENV HV1B8	PENV BIV06	178-201						303-327	
PENV HV1B8	PENV BIV27	207-230						303-327	
PENV HV1B8	PENV FOAMV	804-887						303-327	
PENV HV1B8	PENV HV123	175-188						303-327	
PENV HV1H2	PENV HV2BE	3-26						781-804	
PENV HV1H3	PENV HV2CA	760-773						779-803	
PENV HV1J3	PENV HV2D1	3-26						780-804	
PENV HV1JR	PENV HV2G1	772-785						381-415	
PENV HV1K8	PENV HV2N2	777-800						381-415	
PENV HV1MA	PENV JSRV	541-564						381-415	
PENV HV1MF	PENV 9FV1	804-887						381-415	
PENV HV1ND	PENV 9FV3L	861-884						442-466	
PENV HV1PV	PENV SIVM1	803-826						430-454	
PENV HV121	PENV SIVM1	802-825						430-454	
PENV HV122	PENV SIVML	801-824						428-453	
PENV HV128	PENV SIVS4	806-828						443-467	
PENV HV128	PENV SIVS9	810-833						428-453	
PENV HV128	PHEMA CDVO	200-223						428-453	
PENV HV12H	PHEMA P12H	65-88						430-454	
PENV JSRV	PHEMA P12H	65-88						430-454	
PENV MPV	PHEMA P12H	181-184						430-454	
PENV MPV	PHEMA P12H	26-48						430-454	
PENV MPV	PHEMA P12H	3-26						430-454	
PHEMA IALC	PHEMA P12H	313-338						101-125	
PHEMA IAD3	PHEMA P12H	481-514						101-125	
PHEMA IAD3	PHEMA P12H	322-345						101-125	
PHEMA IAD3	PHEMA P12H	229-252						28-53	
PHEMA IAD3	PHEMA P12H	722-745						62-88	
PHEMA IAD3	PHEMA P12H	10-33						280-304	
PHEMA IAD3	PHEMA P12H	651-874						280-304	
PHEMA IAD3	PHEMA P12H	10-33						281-305	
PHEMA IAD3	PHEMA P12H	1267-1280						176-200	
PHEMA IAD3	PHEMA P12H	1215-1238						176-200	
PHEMA IAD3	PHEMA P12H	1126-1149						58-82	
PHEMA IAD3	PHEMA P12H	1274-1207						355-378	
PHEMA IAD3	PHEMA P12H	1272-1285						68-92	
PHEMA IAD3	PHEMA P12H	1050-1073						88-112	
PHEMA IAD3	PHEMA P12H	1050-1073						173-187	
PHEMA IAD3	PHEMA P12H	1277-1300						108-133	
PHEMA IAD3	PHEMA P12H	186-218						108-132	
PHEMA IAD3	PHEMA P12H	186-218						720-744	
PHEMA IAD3	PHEMA P12H	186-218						3601-3826	
PHEMA IAD3	PHEMA P12H	106-210							

PHEMA IAVI7	38-60		PVGL2 IBVK	185-218		PVQL8 HSVMD	589-613		
PHEMA IAX31	37-58		PVGL2 IBVM	185-218		PVQLB ILTV6	597-621		
PHEMA IAZCO	37-58		PVGL2 IBVU1	178-201		PVQLB ILTV9	607-631		
PHEMA IAZH2	21-43		PVGL2 IBVU2	178-201		PVQLB ILTVT	607-631		
PHEMA IAZH3	21-43		PVGL2 IBVU3	178-201		PVGLB HSV11	413-437		
PHEMA IAZUK	37-58		PVGLB HCMVA	535-558		PVGLB VZVD	489-493		
PHEMA PHODV	38-58		PVGLB HCMVT	535-558		PVGLF SV6	401-425		
PHEMA PIZH	65-87		PVGLB H8V8A	483-506		PVGLH HCMVA	574-588		
PHEMA PIZHT	65-87		PVGLB HCMV8	500-588		PVGLH HCMVT	573-587		
PVPF7 CAPVK	89-111		PVGLC H8V11	487-480		PVGLH HSV11	443-467	803-827	
PVFL8 VACC8	72-84		PVGLC H8V1K	487-480		PVGLH HSVIE	443-487	803-827	
PVG01 H8V11	317-338		PVGLC H8V2	435-458		PVGLM BUNL7	31-55		
PVG03 VACC8	50-72		PVGLC H8V23	435-458		PVGLM BUNSH	31-55		
PVG03 VARV	50-72		PVGLM BUNL7	1387-1410		PVGLM HANTH	684-718		
PVG04 VACC8	11-33		PVGLM BUNSH	1387-1410		PVGLM RVFV	344-388		
PVG04 VARV	11-33		PVGLM UUK	865-888		PVGLM RVFVZ	344-388		
PVG18 H8V11	88-110		PVGLY JUNIN	12-35		PVGLM UUK	561-585		
PVG28 H8V11	173-185		PVGLY LAS8Q	12-35		PVGNM CPMV	311-335		
PVG46 H8V11	20-42		PVGLY LA89J	12-35		PVGP2 EBV	657-681		
PVG48 H8V8A	134-158		PVGLY LYCVA	12-35		PVGP3 EBV	854-878		
PVG48 H8V8A	71-83		PVGLY LYCVW	12-35		PVM1 REOVD	280-304		
PVG58 H8V8A	256-288		PVGLY MOPEI	12-35		PVM1 REOVL	280-304		
PVG58 H8V11	287-288		PVGLY TACV	12-35		PVM21 REOVD	168-192		
PVG58 H8V4	42-64		PVGLY TACV6	12-35		PVM22 REOVD	168-192		
PVG60 H8V11	53-75		PVGLY TACV7	12-35		PVM2 REOVJ	168-192		
PVG65 H8V11	1347-1389		PVGLY TACVT	12-35		PVM2 REOVL	168-192		
PVG8 SPV1R	60-82		PVGNM CPMV	741-764		PVMAT MEAS1	87-111		
PVGL2 IBV6	1056-1078		PVM1 REOVD	324-347	454-477	PVMAT 6SPVB	314-338		
PVGL2 IBV8	1056-1077		PVM1 REOVL	454-477		PVME1 CVBM	137-161		
PVGL2 IBVD2	1056-1078		PVMAT MUMP8	227-250		PVME1 CVHOC	137-161		
PVGL2 IBVK	1056-1077		PVMSA HPBDB	289-292		PVME1 CVTKE	137-161		
PVGL2 IBVM	1056-1077		PVMSA HPBDC	289-291		PVME1 IBV6	74-98		
PVGLB H8V8U	117-139		PVMSA HPBDU	231-254		PVME1 IBVB	74-98		
PVGLB H8V82	745-767		PVMSA HPBDW	289-292		PVME1 IBVB2	74-98		
PVGLC H8VMB	389-421		PVMSA HPBHE	238-259		PVME1 IBVK	74-98		
PVGLC H8VMQ	389-420					PVMSA HPBGS	271-285		
PVGLC H8VMM	389-421					PVMSA WHV1	200-293		
PVGLF 8R8VA	265-287	482-504				PVMSA WHV58	274-288		
PVGLF 8R8VC	484-508					PVMSA WHV7	274-288		
PVGLF 8R8VR	484-508					PVMSA WHV8	274-288		
PVGLF HR8V1	484-506					PVMSA WHV81	274-288		
PVGLF HR8VA	484-508					PVMSA WHVW8	125-148		
PVGLF HR8VL	484-508								
PVGLF HR8VR	484-506								
PVGLF TRTV	452-474								
PVGLG IHNV	77-98								
PVGLG VHSV0	408-428								

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TABLE XIII

SEARCH RESULTS SUMMARY FOR P12LZIPC MOTIF

PCGENE	PI2CTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PCOAT_FCV9	COAT PROTEIN	FELINE CALICIVIRUS (STRAIN F9)	567-590	643-660							
PCOAT_FPV	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS	690-705								
PCOAT_FPV19	COAT PROTEIN VP1	FELINE PANLEUKOPENIA VIRUS (STRAIN 193)	690-705								
PCOAT_HEVS	COAT PROTEIN	HELENIDUM VIRUS S	47-66								
PCOAT_MEVA	COAT PROTEIN VP1	MINK ENTERITIS VIRUS (STRAIN ABASHIRI)	685-700								
PCOAT_MNSV	COAT PROTEIN	MELON NECROTIC SPOT VIRUS	37-53								
PCOAT_MSTV	COAT PROTEIN	MAIZE STRIPE VIRUS	176-197	204-227							
PCOAT_NMV	COAT PROTEIN	NACISSUS MOSAIC VIRUS	67-86								
PCOAT_NODAV	COAT PROTEIN PRECURSOR	NODAMURA VIRUS	379-394								
PCOAT_ORSV	COAT PROTEIN	ODONTOGLOSSUM RINGSPOOT VIRUS	104-130								
PCOAT_OTMV	COAT PROTEIN	ONONIS YELLOW MOSAIC VIRUS	35-52								
PCOAT_PAVC1	COAT PROTEIN VP2	CANINE PARVOVIRUS (TYPE 2 / STRAIN A72)	547-562								
PCOAT_PAVC7	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN 780929)	685-700								
PCOAT_PAVCD	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN CIV-D CORNELL 720)	700-715								
PCOAT_PAVCN	COAT PROTEIN VP1	CANINE PARVOVIRUS (STRAIN N)	711-726								
PCOAT_PEMV	COAT PROTEIN PRECURSOR	PEPPER MOTTLE VIRUS	273-295								
PCOAT_PMV	COAT PROTEIN	PAPAYA MOSAIC POTEXVIRUS	85-103								
PCOAT_PPMVS	COAT PROTEIN	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	64-84	103-129							
PCOAT_PVSP	COAT PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)	129-147								
PCOAT_RSV	COAT PROTEIN	RICE STRIPE VIRUS	128-152								
PCOAT_SNLWM	COAT PROTEIN	SATELLITE MAIZE WHITE LINE MOSAIC VIRUS	51-67								
PCOAT_SMYEA	COAT PROTEIN	STRAWBERRY MILD YELLOW EDGE-ASSOCIATED VIRUS	57-72								
PCOAT_TAMV	GENOME POLYPROTEIN	TAMARILLO MOSAIC VIRUS	222-237								
PCOAT_TBSVB	COAT PROTEIN	TOMATO BUSHY STUNT VIRUS (STRAIN BS-1)	359-383								
PCOAT_TCV	COAT PROTEIN	TURNIP CRINKLE VIRUS	71-89								
PCOAT_TGMV	COAT PROTEIN	TOMATO GOLDEN MOSAIC VIRUS	154-177								
PCOAT_TMGMV	COAT PROTEIN	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	102-128								
PCOAT_TMY	COAT PROTEIN	TOBACCO MOSAIC VIRUS (VULGARE)	102-128								
PCOAT_TMY06	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN 06)	102-128								
PCOAT_TMYD4	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN DAHLEMENSE)	102-128								
PCOAT_TMYER	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN ER)	102-128								
PCOAT_TMYHR	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN HOLMES RIBGRASS (HR))	102-128								
PCOAT_TMYO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN O)	102-128								
PCOAT_TMYOM	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN OM)	102-128								
PCOAT_TMYTO	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN TOMATOL)	102-128								
PCOAT_TMYV	COAT PROTEIN	TOBACCO MOSAIC VIRUS (STRAIN A)	119-142								
PCOAT_TMYD	COAT PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D)	108-134								
PCOAT_TMYV2	COLLAGEN-LIKE PROTEIN	HERPESVIRUS SAMIRI (SUBGROUP C / STRAIN 488)	71-96								
PCOAT_HPBV1	CORE ANTIGEN	HEPATITIS B VIRUS (STRAIN ALPHA1)	79-100								
PCOAT_HPBVA	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADW2)	15-31								
PCOAT_HPBVZ	CORE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADYW)	79-100								
PDNBI_ADE02	PROBABLE DNA-BINDING PROTEIN	HUMAN ADENOVIRUS TYPE 2	71-93								
PDNBI_EBV	MAJOR DNA-BINDING PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-4)	649-673								
PDNBI_HCMVA	MAJOR DNA-BINDING PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	681-703								
PDNBI_HSV11	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	459-476	597-620							
PDNBI_HSV1F	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	459-476	597-620							
PDNBI_HSV1K	MAJOR DNA-BINDING PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	459-476	597-620							
PDNBI_HSVB2	MAJOR DNA-BINDING PROTEIN	BOVINE HERPESVIRUS TYPE 2 (STRAIN BN4F)	455-472	596-616							
PDNBI_HSVB	MAJOR DNA-BINDING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4F)	810-831								
PDNBI_HSVSA	MAJOR DNA-BINDING PROTEIN	HERPESVIRUS SAMIRI (STRAIN 11)	108-127	610-629	869-887	974-1000					
PDNBI_MCMVS	MAJOR DNA-BINDING PROTEIN	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	657-684								
PDNBI_SCMVC	MAJOR DNA-BINDING PROTEIN	SIMIAN CYTOMEGALOVIRUS (STRAIN COLBURN)	188-212	643-670							
PDNLI_VAV	DNA LIGASE	VARIOLA VIRUS	269-294								
PDPOL_ADE02	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 2	264-283	828-850							
PDPOL_ADE05	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 5	264-283	828-850							
PDPOL_ADE07	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 7	331-350	494-517	894-916						
PDPOL_ADE12	DNA POLYMERASE	HUMAN ADENOVIRUS TYPE 12	262-281	562-583	826-848						

PCGENE	PLICTLZIP	PROTEIN	FILE NAME	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PDOL_CBPV	DNA POLYMERASE		CHLORISTONEURA BIENNIS ENTOMOPHOSVIRUS	AREA 1 430-434	AREA 2 634-678	AREA 3 732-757							
PDOL_CHV2	DNA POLYMERASE		CHLORELLA VIRUS NY-2A	424-442									
PDOL_CHV7	DNA POLYMERASE		PARAMECIUM BURSARIA CHLORELLA VIRUS 1	153-172	424-442								
PDOL_EBV	DNA POLYMERASE		EPSTEIN-BARR VIRUS (STRAIN B95-9)	334-374	438-463	524-542	667-687	971-990					
PDOL_FOWPV	DNA POLYMERASE		FOWLPOX VIRUS	60-77	220-247								
PDOL_HCMVA	DNA POLYMERASE		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	569-587	945-960	1029-1053							
PDOL_HPBDB	DNA POLYMERASE		DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	4-29	157-174	522-541	554-572						
PDOL_HPBDC	DNA POLYMERASE		DUCK HEPATITIS B VIRUS (STRAIN CHINA)	4-29	157-174	521-540	553-571						
PDOL_HPBDD	DNA POLYMERASE		DUCK HEPATITIS B VIRUS	181-200	213-231								
PDOL_HPBDD	DNA POLYMERASE		DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	4-29	157-174	522-541	554-572						
PDOL_HPBGS	DNA POLYMERASE		GROUND SQUIRREL HEPATITIS VIRUS	448-475									
PDOL_HPBHE	DNA POLYMERASE		HERON HEPATITIS B VIRUS	4-29	554-572								
PDOL_HPBV2	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW2)	412-439	447-463	761-780							
PDOL_HPBV4	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW4)	410-417									
PDOL_HPBV4	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	410-439	447-463	761-780							
PDOL_HPBVA	DNA POLYMERASE		HEPATITIS B VIRUS (STRAIN ALPHA1)	80-96	399-426	434-450	750-767						
PDOL_HPBVI	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIPDW420)	80-96	410-437	445-468	761-778						
PDOL_HPBVI	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIPDW233)	80-96	410-437	445-468	761-778						
PDOL_HPBVL	DNA POLYMERASE		HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE)	80-96	399-426	434-457	750-767						
PDOL_HPBVM	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW / MUTANT)	80-96	410-437	760-777							
PDOL_HPBVO	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	80-96	410-437	445-468	761-778						
PDOL_HPBVP	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PODW294)	412-439	447-463								
PDOL_HPBVR	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADR)	80-96	410-437	761-778							
PDOL_HPBVW	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADW)	82-98	405-432	440-456							
PDOL_HPBVY	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE AYW)	80-96	399-426	434-457	750-767						
PDOL_HPBVZ	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE ADYW)	80-96	399-426	434-457							
PDOL_HSV11	DNA POLYMERASE		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	797-817	877-897	1073-1090							
PDOL_HSV1A	DNA POLYMERASE		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	797-817	877-897	1073-1090							
PDOL_HSV1K	DNA POLYMERASE		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	797-817	877-897	1073-1090							
PDOL_HSV1S	DNA POLYMERASE		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	797-817	877-897	1073-1090							
PDOL_HSV21	DNA POLYMERASE		HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 186)	802-822	882-902	1078-1095							
PDOL_HSV6U	DNA POLYMERASE		HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	652-672	786-803	858-882							
PDOL_HSV6B	DNA POLYMERASE		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	283-299	377-392	454-477	798-818	878-898					
PDOL_HSV7	DNA POLYMERASE		ICTALURID HERPESVIRUS 1	257-275	397-418								
PDOL_HSV8A	DNA POLYMERASE		MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	303-322	535-553	780-802							
PDOL_HSV8A	DNA POLYMERASE		MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	303-322	535-553	780-802							
PDOL_HSV8A	DNA POLYMERASE		AUTOGRAHA CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	518-536	676-697								
PDOL_HSV8A	DNA POLYMERASE		VARIOLA VIRUS	421-437									
PDOL_HSV8A	DNA POLYMERASE		VARIOLA-ZOSTER VIRUS (STRAIN DUMAS)	312-331	363-382	440-463	713-740	1006-1024					
PDOL_HSV8A	DNA POLYMERASE		WOODCHUCK HEPATITIS VIRUS 1	446-473									
PDOL_HSV8A	DNA POLYMERASE		WOODCHUCK HEPATITIS VIRUS 59	451-478									
PDOL_HSV8A	DNA POLYMERASE		WOODCHUCK HEPATITIS VIRUS 7	451-478									
PDOL_HSV8A	DNA POLYMERASE		WOODCHUCK HEPATITIS VIRUS 8	450-477	554-571								
PDOL_HSV8A	DNA POLYMERASE		WOODCHUCK HEPATITIS VIRUS 8	451-478									
PDOL_HSV8A	DNA POLYMERASE		WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW523)	123-150									
PDOL_HSV8A	DNA POLYMERASE		HEPATITIS B VIRUS (SUBTYPE AYW)	399-426	434-450	750-767							
PDOL_HSV8A	DNA POLYMERASE		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	107-126									
PDOL_HSV8A	DNA POLYMERASE		EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	130-154									
PDOL_HSV8A	DNA POLYMERASE		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	130-149									
PDOL_HSV8A	DNA POLYMERASE		ICTALURID HERPESVIRUS 1	72-95									
PDOL_HSV8A	DNA POLYMERASE		HERPESVIRUS SAIMIRI (STRAIN 11)	22-45	79-104	168-183							
PDOL_HSV8A	DNA POLYMERASE		MOUSE ADENOVIRUS TYPE 1	24-47									
PDOL_HSV8A	DNA POLYMERASE		HUMAN ADENOVIRUS TYPE 7	8-35									
PDOL_HSV8A	DNA POLYMERASE		HUMAN ADENOVIRUS TYPE 4	104-120									
PDOL_HSV8A	DNA POLYMERASE		HUMAN ADENOVIRUS TYPE 7	8-35									
PDOL_HSV8A	DNA POLYMERASE		SMAN ADENOVIRUS TYPE 7	173-189	238-254								
PDOL_HSV8A	DNA POLYMERASE		HUMAN ADENOVIRUS TYPE 12	451-467									

PCGENE	PICTLZIP	All Virus (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PEIBL_ADEC2	E1B PROTEIN, LARGE T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	101-122								
PEIBL_ADE01	EARLY E1B 44 KD PROTEIN	TUPAINA ADENOVIRUS	75-101								
PEIBS_ADEC2	E1B PROTEIN, SMALL T-ANTIGEN	CANINE ADENOVIRUS TYPE 2	55-77								
PEIBS_ADEM1	E1B PROTEIN, SMALL T-ANTIGEN	MOUSE ADENOVIRUS TYPE 1	118-138								
PEI10_ADE02	EARLY E1B 10.4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 2	3-21	34-60							
PEI10_ADE05	EARLY E1B 19.4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 5	3-21	33-60							
PEI10_ADE07	EARLY E1B 10.4 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	3-24								
PEI11_ADE02	EARLY E1A 11.6 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 2	27-53								
PEI11_ADE03	EARLY E1A 9.0 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	19-45								
PEI11_ADE05	EARLY E1A 10.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 5	20-46								
PEI11_ADE07	EARLY E1A 7.7 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	36-62								
PEI14_ADE05	EARLY E1A 14.5 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5	108-125								
PEI15_ADE03	EARLY E1B 14.5 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 3	52-72								
PEI15_ADE07	EARLY E1B 14.9 KD PROTEIN PRECURSOR	HUMAN ADENOVIRUS TYPE 7	52-72								
PEI16_ADE03	EARLY E1B 16 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	102-125								
PEI21_ADE03	EARLY E1B 20.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 3	146-167								
PEI21_ADE07	EARLY E1B 20.5 KD GLYCOPROTEIN	HUMAN ADENOVIRUS TYPE 7	146-167								
PEI32_ADEC1	EARLY E1B 22.2 KD GLYCOPROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	155-177								
PEI32_ADEM1	PROBABLE EARLY E1 11 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	105-127								
PEI41_ADE02	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2	56-77								
PEI41_ADE03	PROBABLE EARLY E4 11 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3	61-80								
PEI43_ADEM1	PROBABLE EARLY E4 33 KD PROTEIN	MOUSE ADENOVIRUS TYPE 1	80-106								
PEI44_ADE02	EARLY E4 34 KD PROTEIN	MOUSE ADENOVIRUS TYPE 2	261-286								
PEAR_EBV	EARLY ANTIGEN PROTEIN D	EPSTEIN-BARR VIRUS (STRAIN B95-8)	159-184								
PEAR_EBV	EARLY ANTIGEN PROTEIN R	EPSTEIN-BARR VIRUS (STRAIN B95-8)	126-141								
PEB2_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	113-131	662-683							
PEB3_EBV	EBNA-3 NUCLEAR PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	21-41								
PEFTI_VAV	EARLY TRANSCRIPTION FACTOR 70 KD SUBUNIT	VARIOLA VIRUS	380-407								
PENV1_FR5FV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV2_FR5FV	ENV POLYPROTEIN PRECURSOR	FRIEND SPLEEN FOCUS-FORMING VIRUS	380-407								
PENV_AVR3	ENV POLYPROTEIN	AVIAN RETROVIRUS RPL30	206-225								
PENV_AVISU	COAT PROTEIN GP37	AVIAN SARCOMA VIRUS (STRAIN UR2)	98-117								
PENV_BAEVM	ENV POLYPROTEIN	ABOON ENDOGENOUS VIRUS (STRAIN MT)	170-190	202-224							
PENV_BIV06	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	47-68	178-201	434-450	525-546					
PENV_BIV27	ENV POLYPROTEIN PRECURSOR	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	47-68	147-168	207-230	463-479	554-575				
PENV_BLVAF	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE FLK)	303-327								
PENV_BLVAV	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	303-327								
PENV_BLV81	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AMERICAN ISOLATE YDM)	303-327								
PENV_BLV82	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB285)	303-327								
PENV_BLV83	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (BELGIUM ISOLATE LB59)	303-327								
PENV_BLVJ	ENV POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	303-327								
PENV_FENV1	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	10-47	225-246	630-651						
PENV_FENV2	ENV POLYPROTEIN PRECURSOR	FELINE ENDOGENOUS VIRUS ECE1	10-47	225-246	630-651						
PENV_FENV6	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (CLONE CFE-6)	38-55	624-645							
PENV_FLV06	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN AGLASGOW-1)	9-29	447-468	605-626						
PENV_FLV08	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN LAMBDA-B1)	467-488	625-646							
PENV_FLV8A	ENV POLYPROTEIN PRECURSOR	FELINE LEUKEMIA VIRUS (STRAIN SARMA)	444-465	602-623							
PENV_FVSA	ENV POLYPROTEIN	HUMAN SPINARETROVIRUS (FOAMY VIRUS)	153-174	255-275	300-325	481-496	710-727	864-887	924-951	957-978	
PENV_FVGA	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	467-488	625-646							
PENV_FVGB	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN GA)	447-468	605-626							
PENV_FVSM	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SM)	450-471	608-629							
PENV_FVST	ENV POLYPROTEIN PRECURSOR	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	467-488								
PENV_GALV	ENV POLYPROTEIN PRECURSOR	GIBBON APE LEUKEMIA VIRUS	519-540								
PENV_HYB1	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	498-520								
PENV_HYB4	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH8 ISOLATE)	493-515								
PENV_HYB8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAN ISOLATE)	494-516								
PENV_HYB8	GP160 PRECURSOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	503-525								

PCGENE	FILENAME	PICTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
	PROTEIN		VIRUS									
PENV_HV1C4	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CHC-451 ISOLATE)	428-448								AREA 9
PENV_HV1EL	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JLI ISOLATE)	495-517								
PENV_HV1H2	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (IIX02 ISOLATE)	498-520								
PENV_HV1H3	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HX03 ISOLATE)	498-520								
PENV_HV1J3	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3 ISOLATE)	510-532								
PENV_HV1J4	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JH3SF ISOLATE)	490-512								
PENV_HV1KB	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN KH-1 (P12))	504-526	532-570	752-768						
PENV_HV1MA	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	500-522								
PENV_HV1MF	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MFA ISOLATE)	496-518								
PENV_HV1NS	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	178-203								
PENV_HV1ND	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	488-510								
PENV_HV1OY	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	123-140								
PENV_HV1PV	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	498-520								
PENV_HV1RH	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RFIAT ISOLATE)	445-460								
PENV_HV1S1	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	489-511	738-754							
PENV_HV1S3	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF33 ISOLATE)	300-322								
PENV_HV1Z3	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLATE)	123-145	410-427	495-517						
PENV_HV1Z3	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 3 ISOLATE)	117-133	175-198							
PENV_HV1Z6	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE 6 ISOLATE)	497-519								
PENV_HV1Z8	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z-84 ISOLATE)	505-527								
PENV_HV1ZH	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ZAIRE HZ321 ISOLATE)	123-142	438-453	498-520						
PENV_HV2BE	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	3-26	750-775	781-804						
PENV_HV2CA	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	750-777								
PENV_HV2D1	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	3-26	741-766	772-795						
PENV_HV2D2	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9-28								
PENV_HV2G1	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	741-766	772-795							
PENV_HV2N2	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	742-767	777-800							
PENV_HV2R0	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	751-776								
PENV_HV2S8	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLIS1Y)	743-768	778-804							
PENV_HV2ST	GP160 PRECURSOR		HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	745-770								
PENV_JSRV	ENV POLYPROTEIN PRECURSOR		SHEEP PULMONARY ADENOMATOSIS VIRUS	104-119	299-325	376-398	541-564					
PENV_MCF7	ENV POLYPROTEIN PRECURSOR		MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	600-621								
PENV_MCF7J	ENV POLYPROTEIN PRECURSOR		MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CH-601-622)	601-622								
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR		MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	630-651								
PENV_MLVAV	ENV POLYPROTEIN PRECURSOR		MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS	630-651								
PENV_MLVCB	ENV POLYPROTEIN PRECURSOR		CAS-BR-E MURINE LEUKEMIA VIRUS	625-646								
PENV_MLVF5	ENV POLYPROTEIN PRECURSOR		FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	639-660								
PENV_MLVFF	ENV POLYPROTEIN PRECURSOR		FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	639-660								
PENV_MLVFP	ENV POLYPROTEIN PRECURSOR		FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	639-660								
PENV_MLVHO	ENV POLYPROTEIN PRECURSOR		HOMULY MURINE LEUKEMIA VIRUS (MUS HORTULANUS VIRUS)	626-647								
PENV_MLVKI	ENV POLYPROTEIN		KIRSTEN MURINE LEUKEMIA VIRUS	167-188								
PENV_MLVMO	ENV POLYPROTEIN PRECURSOR		MOLONEY MURINE LEUKEMIA VIRUS	629-650								
PENV_MLVVD	ENV POLYPROTEIN PRECURSOR		RADIATION MURINE LEUKEMIA VIRUS	624-645								
PENV_MLVYK	ENV POLYPROTEIN PRECURSOR		RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	624-645								
PENV_MMTVB	ENV POLYPROTEIN		MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	643-663								
PENV_MMTVG	ENV POLYPROTEIN		MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	643-663								
PENV_MPNV	ENV POLYPROTEIN		SMAN MASON-PFIZER VIRUS	213-225								
PENV_MSVTB	ENV POLYPROTEIN		FBI MURINE OSTEOSARCOMA VIRUS	170-191								
PENV_OMVVS	ENV POLYPROTEIN PRECURSOR		OVINE LENTIVIRUS (STRAIN SA-OMV)	658-683								
PENV_RMCFV	ENV POLYPROTEIN PRECURSOR		RAUSCHER MINK CELL FOCUS-INDUCING VIRUS	603-624								
PENV_RSVF	ENV POLYPROTEIN		ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	42-49	533-552							
PENV_SFV1	ENV POLYPROTEIN		SMAN FOAMY VIRUS (TYPE 1)	300-325	710-727	864-887	924-951	957-978				
PENV_SFV2L	ENV POLYPROTEIN		SMAN FOAMY VIRUS (TYPE 2 / STRAIN LK3)	157-178	304-329	707-724	861-884	921-948	954-975			
PENV_SIVAI	GP160 PRECURSOR		SMAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	437-458								
PENV_SIVAG	GP160 PRECURSOR		SMAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	442-463								
PENV_SIVAI	GP160 PRECURSOR		SMAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GR1-1)	421-442								
PENV_SIVAT	GP160 PRECURSOR		SMAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	435-456								
PENV_SIVGB	GP160 PRECURSOR		SMAN IMMUNODEFICIENCY VIRUS (ISOLATE GB1)	93-109								

PCGENE	P12CTL21P	FILE NAME	PROTEIN	ALL Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PENY_SIVM1	GP160 PRECURSOR	PENY_SIVM1	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	766-793	803-826							
PENY_SIVM2	GP160 PRECURSOR	PENY_SIVM2	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	139-154	765-792	802-825						
PENY_SIVM3	GP160 PRECURSOR	PENY_SIVM3	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE)	139-154	764-791	801-824						
PENY_SIVM4	GP160 PRECURSOR	PENY_SIVM4	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (P216/SMH4 ISOLATE)	769-789	806-829							
PENY_SIVM5	GP160 PRECURSOR	PENY_SIVM5	GP160 PRECURSOR	SIMIAN IMMUNODEFICIENCY VIRUS (P31/BC13 ISOLATE)	773-793	810-833							
PENY_SIVM6	P15E PROTEIN	PENY_SIVM6	P15E PROTEIN	SIMIAN SARCOMA VIRUS	42-63								
PENY_SIVM7	ENV POLYPROTEIN	PENY_SIVM7	ENV POLYPROTEIN	SIMIAN RETROVIRUS SKV-1	213-235								
PENY_SIVM8	ERBA ONCOGENE PROTEIN	PENY_SIVM8	ERBA ONCOGENE PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN ES4)	227-249								
PETFL_FOWP1	EARLY TRANSCRIPTION FACTOR	PETFL_FOWP1	EARLY TRANSCRIPTION FACTOR	FOWLPOX VIRUS (STRAIN FP-1)	21-41	73-92							
PETFL_SFVKA	EARLY TRANSCRIPTION FACTOR	PETFL_SFVKA	EARLY TRANSCRIPTION FACTOR	SHOPE FIBROMA VIRUS (STRAIN KASZA)	21-41								
PETFL_VACCC	EARLY TRANSCRIPTION FACTOR	PETFL_VACCC	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-41								
PETFL_VACCV	EARLY TRANSCRIPTION FACTOR	PETFL_VACCV	EARLY TRANSCRIPTION FACTOR	VACCINIA VIRUS (STRAIN WR)	21-41								
PETFL2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	PETFL2_VACCC	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	50-73	101-117	165-187	285-308	558-582				
PETFL2_VACCV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	PETFL2_VACCV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VACCINIA VIRUS (STRAIN WR)	48-72								
PETFL2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	PETFL2_VARV	EARLY TRANSCRIPTION FACTOR 82 KD SUBUNIT	VARIOLA VIRUS	50-73	101-117	165-187	285-308	558-582				
PEXON_HSV11	ALKALINE EXONUCLEASE	PEXON_HSV11	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	165-180								
PEXON_HSV2	ALKALINE EXONUCLEASE	PEXON_HSV2	ALKALINE EXONUCLEASE	HERPES SIMPLEX VIRUS (TYPE 2)	155-170								
PEXON_HSV3	ALKALINE EXONUCLEASE	PEXON_HSV3	ALKALINE EXONUCLEASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	276-291								
PEXON_HSV4	ALKALINE EXONUCLEASE	PEXON_HSV4	ALKALINE EXONUCLEASE	PSUEDORABIES VIRUS (STRAIN NIA-3)	36-51								
PEXON_VZVD	ALKALINE EXONUCLEASE	PEXON_VZVD	ALKALINE EXONUCLEASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	28-44	217-262							
PFIB2_ADEA0	41 4 KD FIBER PROTEIN	PFIB2_ADEA0	41 4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 40	116-133								
PFIB2_ADEA1	41 4 KD FIBER PROTEIN	PFIB2_ADEA1	41 4 KD FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 41	116-133								
PFIBP_ADE03	FIBER PROTEIN	PFIBP_ADE03	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 3	152-173								
PFIBP_ADE05	FIBER PROTEIN	PFIBP_ADE05	FIBER PROTEIN	HUMAN ADENOVIRUS TYPE 5	447-473								
PFIBP_ADEB3	FIBER PROTEIN	PFIBP_ADEB3	FIBER PROTEIN	BOVINE ADENOVIRUS TYPE 3 (MAST ADENOVIRUS BOS3)	347-372	775-801							
PFIBP_ADEC1	FIBER PROTEIN	PFIBP_ADEC1	FIBER PROTEIN	CANINE ADENOVIRUS TYPE 1 (STRAIN GLAXO)	382-397								
PFIBP_ADEM1	FIBER PROTEIN	PFIBP_ADEM1	FIBER PROTEIN	MOUSE ADENOVIRUS TYPE 1	191-215	227-252	493-513	548-576	579-599				
PGAG_AVEV1	GAG POLYPROTEIN	PGAG_AVEV1	GAG POLYPROTEIN	AVIAN ENDOGENOUS VIRUS EV-1	53-78								
PGAG_AVEV2	GAG POLYPROTEIN	PGAG_AVEV2	GAG POLYPROTEIN	AVIAN ENDOGENOUS ROUS-ASSOCIATED VIRUS-0	2-27								
PGAG_AVMC	GAG POLYPROTEIN	PGAG_AVMC	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS MC29	53-78								
PGAG_AVM2	GAG POLYPROTEIN	PGAG_AVM2	GAG POLYPROTEIN	AVIAN MYELOCYTOMATOSIS VIRUS HBI	53-78								
PGAG_AVISU	CORE PROTEIN P19	PGAG_AVISU	CORE PROTEIN P19	AVIAN SARCOMA VIRUS (STRAIN UR2)	53-78								
PGAG_AVISY	GAG POLYPROTEIN	PGAG_AVISY	GAG POLYPROTEIN	AVIAN SARCOMA VIRUS (STRAIN Y71)	53-78								
PGAG_BAEM	GAG POLYPROTEIN	PGAG_BAEM	GAG POLYPROTEIN	BARBOON ENDOGENOUS VIRUS (STRAIN M7)	397-422								
PGAG_BLAU	GAG POLYPROTEIN	PGAG_BLAU	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	212-238								
PGAG_BLV1	GAG POLYPROTEIN	PGAG_BLV1	GAG POLYPROTEIN	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	213-239								
PGAG_CAEVC	GAG POLYPROTEIN	PGAG_CAEVC	GAG POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	102-119								
PGAG_FUSV	GAG POLYPROTEIN	PGAG_FUSV	GAG POLYPROTEIN	FUJINAMI SARCOMA VIRUS	53-78								
PGAG_HTLIA	GAG POLYPROTEIN	PGAG_HTLIA	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (STRAIN ATK)	77-94								
PGAG_HTLIC	GAG POLYPROTEIN	PGAG_HTLIC	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (CARIBBEAN ISOLATE)	77-94								
PGAG_HTLIM	GAG POLYPROTEIN	PGAG_HTLIM	GAG POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (ISOLATE MT-2)	77-94								
PGAG_HVIA2	GAG POLYPROTEIN	PGAG_HVIA2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE)	65-91								
PGAG_HVIB1	GAG POLYPROTEIN	PGAG_HVIB1	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE)	65-91								
PGAG_HVIB5	GAG POLYPROTEIN	PGAG_HVIB5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH5 ISOLATE)	65-91								
PGAG_HVIBR	GAG POLYPROTEIN	PGAG_HVIBR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	65-91								
PGAG_HVIC4	GAG POLYPROTEIN	PGAG_HVIC4	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (CDC-451 ISOLATE)	65-91								
PGAG_HVIEL	GAG POLYPROTEIN	PGAG_HVIEL	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE)	65-91								
PGAG_HVIL2	GAG POLYPROTEIN	PGAG_HVIL2	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE)	65-91								
PGAG_HVIL3	GAG POLYPROTEIN	PGAG_HVIL3	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (H3 ISOLATE)	65-91								
PGAG_HVILR	GAG POLYPROTEIN	PGAG_HVILR	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRC5F ISOLATE)	65-91								
PGAG_HVIMA	GAG POLYPROTEIN	PGAG_HVIMA	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE)	262-285								
PGAG_HVIMN	GAG POLYPROTEIN	PGAG_HVIMN	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MN ISOLATE)	65-91								
PGAG_HVIN5	GAG POLYPROTEIN	PGAG_HVIN5	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE)	65-91								
PGAG_HVIND	GAG POLYPROTEIN	PGAG_HVIND	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	65-91	352-373							
PGAG_HVIOY	GAG POLYPROTEIN	PGAG_HVIOY	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OYI ISOLATE)	65-91								
PGAG_HVIPV	GAG POLYPROTEIN	PGAG_HVIPV	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	65-91								
PGAG_HVIRH	GAG POLYPROTEIN	PGAG_HVIRH	GAG POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (RH/AT ISOLATE)	65-91								

PCGENE	P12CTL2IP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PIHMA_P1H1U	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX930562)	111-128	272-299	324-340						
PIHMA_P1H1V	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN TEX1267783)	111-128	272-299	324-340						
PIHMA_P1H1W	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WAS1064179)	111-128	272-299	324-340						
PIHMA_P1H1X	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN WAS10151173)	111-128	272-299	324-340						
PIHMA_P1H1A	HEMAGGLUTININ-NEURAMINIDASE	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA)	50-67								
PIHMA_P1H1K	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN KABETE O)	368-383								
PIHMA_P1H1L	HEMAGGLUTININ-NEURAMINIDASE	RINDERPEST VIRUS (STRAIN L)	4-30								
PIHMA_P1H1S	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN 2 / HOST MUTANTS)	322-342								
PIHMA_P1H1T	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN FUSION II)	322-342								
PIHMA_P1H1I	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN IARRIS)	322-342								
PIHMA_P1H1J	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN HV)	322-342								
PIHMA_P1H1Z	HEMAGGLUTININ-NEURAMINIDASE	SENDAI VIRUS (STRAIN Z)	322-342								
PIHMA_P1H1V	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 41	55-73	85-102	107-132						
PIHMA_P1H1S	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (STRAIN W3)	7-28	84-101	379-400						
PIHMA_P1H1M	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CH)	7-28	84-101	379-400						
PIHMA_P1H1P	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CH+)	7-28	84-101	379-400						
PIHMA_P1H1Q	HEMAGGLUTININ-NEURAMINIDASE	SIMIAN VIRUS 5 (ISOLATE CANINE/CH+)	7-28	84-101	379-400						
PIHMA_P1H1R	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	173-192								
PIHMA_P1H1C	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN IHD-J)	173-192								
PIHMA_P1H1D	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN TIAN TAN)	173-192								
PIHMA_P1H1E	HEMAGGLUTININ-NEURAMINIDASE	VACCINIA VIRUS (STRAIN WA)	173-192								
PIHMA_P1H1F	HEMAGGLUTININ-NEURAMINIDASE	VARIOLA VIRUS	175-194								
PIHMA_P1H1G	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 2	38-61	119-140							
PIHMA_P1H1H	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 3	27-48								
PIHMA_P1H1I	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 3	38-61	119-140							
PIHMA_P1H1J	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 41	38-61	128-146							
PIHMA_P1H1K	HEMAGGLUTININ-NEURAMINIDASE	MOUSE ADENOVIRUS TYPE 1	36-52								
PIHMA_P1H1L	HEMAGGLUTININ-NEURAMINIDASE	HUMAN ADENOVIRUS TYPE 1, AND 3	92-117								
PIHMA_P1H1M	HEMAGGLUTININ-NEURAMINIDASE	CANINE ADENOVIRUS TYPE 2	52-77								
PIHMA_P1H1N	HEMAGGLUTININ-NEURAMINIDASE	TUPAIA ADENOVIRUS	60-82								
PIHMA_P1H1O	HEMAGGLUTININ-NEURAMINIDASE	COWPOX VIRUS	517-533	558-583	609-636						
PIHMA_P1H1P	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	68-83								
PIHMA_P1H1Q	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	169-190								
PIHMA_P1H1R	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	60-77								
PIHMA_P1H1S	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	239-260								
PIHMA_P1H1T	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	2-29								
PIHMA_P1H1U	HEMAGGLUTININ-NEURAMINIDASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	97-119								
PIHMA_P1H1V	HEMAGGLUTININ-NEURAMINIDASE	SOYBEAN CHLOROTIC MOTTLE VIRUS	101-123	131-153	759-777						
PIHMA_P1H1W	HEMAGGLUTININ-NEURAMINIDASE	EPSTEIN-BARR VIRUS (STRAIN B95-8)	156-176	202-222							
PIHMA_P1H1X	HEMAGGLUTININ-NEURAMINIDASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD 69)	8-29	45-61	122-143	751-768					
PIHMA_P1H1Y	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	8-29	45-61	122-143	751-768					
PIHMA_P1H1Z	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN ANGELOTTI)	8-29	45-61	122-143	751-768					
PIHMA_P1H1A	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	8-29	122-143	746-763						
PIHMA_P1H1B	HEMAGGLUTININ-NEURAMINIDASE	BOVINE HERPESVIRUS TYPE 2 (STRAIN BNV)	12-37	130-151							
PIHMA_P1H1C	HEMAGGLUTININ-NEURAMINIDASE	BOVINE HERPESVIRUS TYPE 1	37-56	129-144	712-755						
PIHMA_P1H1D	HEMAGGLUTININ-NEURAMINIDASE	HERPESVIRUS SAIMIRI (STRAIN 11)	27-49	51-78	647-672						
PIHMA_P1H1E	HEMAGGLUTININ-NEURAMINIDASE	MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	176-144	202-229	386-411						
PIHMA_P1H1F	HEMAGGLUTININ-NEURAMINIDASE	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	285-307	698-718							
PIHMA_P1H1G	HEMAGGLUTININ-NEURAMINIDASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	69-88	619-639	725-744						
PIHMA_P1H1H	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	668-684								
PIHMA_P1H1I	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN H32)	713-729								
PIHMA_P1H1J	HEMAGGLUTININ-NEURAMINIDASE	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	82-102								
PIHMA_P1H1K	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	211-227								
PIHMA_P1H1L	HEMAGGLUTININ-NEURAMINIDASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	81-98	621-637							
PIHMA_P1H1M	HEMAGGLUTININ-NEURAMINIDASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	708-725	716-759							
PIHMA_P1H1N	HEMAGGLUTININ-NEURAMINIDASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	708-725	716-759							
PIHMA_P1H1O	HEMAGGLUTININ-NEURAMINIDASE	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	488-506	555-611	1202-1218						
PIHMA_P1H1P	HEMAGGLUTININ-NEURAMINIDASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	547-563								

PCGENE	P12CTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
PIE18 PRVIF	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BECKER)	731-748								
PIE18 PRVKA	IMMEDIATE-EARLY PROTEIN IE180	PSEUDORABIES VIRUS (STRAIN KAPLAN)	720-717								
PIE63 HCKMYA	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	364-383								
PIE63 HSV11	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	286-304								
PIE63 HSV2H	TRANSCRIPTIONAL REGULATOR IE63	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 11G53)	378-394								
PIE63 HSV2B	TRANSCRIPTIONAL REGULATOR IE63 HOMOLOG	EQUINE HERPESVIRUS TYPE 1 (STRAIN AIMP)	373-393								
PIE63 HSV5A	31 KD IMMEDIATE-EARLY PHOSPHOPROTEIN	HERPESVIRUS SAMIRI (STRAIN 11)	301-326								
PIE68 HSV11	IMMEDIATE-EARLY PROTEIN IE68	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	189-205								
PIE68 HSV5A	IMMEDIATE-EARLY PROTEIN IE68	EQUINE HERPESVIRUS TYPE 4	81-104								
PIE68 HSV2B	IMMEDIATE-EARLY PROTEIN	EQUINE HERPESVIRUS TYPE 1	93-116								
PIE68 PRVKA	IMMEDIATE-EARLY PROTEIN	PSEUDORABIES VIRUS (STRAIN KAPLAN)	85-108								
PIE68 VZVD	GENE 63/70 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	57-78								
PIR14 HCMVA	HYPOTHETICAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	117-137								
PKERB_AVIER	EBB TYROSINE KINASE TRANSFORMING PROTEIN	AVIAN ERYTHROBLASTOSIS VIRUS	64-84	297-324							
PKFES_FSVGA	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-ARNSTEIN)	73-88								
PKFES_FSVST	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN SNYDER-THEILEN)	2-22								
PKFGR_FSVGR	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN GARDNER-RASHEED)	269-288								
PKFMS_FSVMD	FMS TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN MCDONOUGH)	141-159	243-263	434-450	548-563	781-801	856-877			
PKFPS_AVISP	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN PRCL)	247-274								
PKFPS_FUISV	TYROSINE-PROTEIN KINASE TRANSFORMING PROTEIN	FUJINAMI SARCOMA VIRUS	259-275	346-370	400-420	587-614					
PKITH_ASF67	THYMIDINE KINASE	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	18-41								
PKITH_EBV	THYMIDINE KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-3)	403-418	428-446							
PKITH_FLDV	THYMIDINE KINASE	FISH LYMPHOCYTIS DISEASE VIRUS	96-117	252-275							
PKITH_HSV11	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	221-249								
PKITH_HSV1C	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN CL101)	221-249								
PKITH_HSV1E	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	221-249								
PKITH_HSV1K	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	221-249								
PKITH_HSV1S	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN SC16)	221-249								
PKITH_HSV23	THYMIDINE KINASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	224-250	333-348							
PKITH_HSVB6	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 6660)	191-219	280-304							
PKITH_HSVBH	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 2 (STRAIN BHM-1)	180-202								
PKITH_HSVBM	THYMIDINE KINASE	BOVINE HERPES VIRUS TYPE 3 (STRAIN WC11)	381-399	609-633							
PKITH_HSVBQ	THYMIDINE KINASE	BOVINE HERPESVIRUS TYPE 12 (STRAIN QJ932)	194-220	282-306							
PKITH_HSV6A	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	174-193	261-284							
PKITH_HSV6B	THYMIDINE KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (ISOLATE HVS25A)	18-33	174-193	274-298						
PKITH_HSVF	THYMIDINE KINASE	FELINE HERPESVIRUS (FELID HERPESVIRUS 1)	171-189								
PKITH_HSV11	THYMIDINE KINASE	ICTALURID HERPESVIRUS 1	14-32								
PKITH_HSVNR	THYMIDINE KINASE	MARMOSSET HERPESVIRUS	189-215								
PKITH_HSVSA	THYMIDINE KINASE	HERPESVIRUS SAMIRI (STRAIN 11)	208-232								
PKITH_ILTVT	THYMIDINE KINASE	INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	183-202	208-234							
PKITH_VZV4	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 40A2)	197-216								
PKITH_VZV7	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN 7-1-3)	197-216								
PKITH_VZVD	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	197-216								
PKITH_VZVG	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (ACYCLOVIR-RESISTANT STRAIN GK)	197-216								
PKITH_VZVW	THYMIDINE KINASE	VARICELLA-ZOSTER VIRUS (VZV)	197-216								
PKKIT_FSVHZ	KIT TYROSINE KINASE TRANSFORMING PROTEIN	FELINE SARCOMA VIRUS (STRAIN HARDY-ZUCKERMAN 4)	192-214	276-297							
PKR15_HSV11	GENE 15 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	151-167	338-374							
PKR16_HSV11	GENE 16 PROTEIN KINASE	ICTALURID HERPESVIRUS 1	197-217	286-311							
PKR1_HSV11	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	276-296	338-377							
PKR1_HSV2	SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 2)	289-307								
PKR1_HSV2B	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	289-307								
PKR1_HSV2K	SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)	196-211	313-338							
PKR1_VZVD	SERINE/THREONINE-PROTEIN KINASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	179-197								
PKR2_EBV	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EPSTEIN-BARR VIRUS (STRAIN B95-4)	247-267								
PKR2_HSV11	PROBABLE SERINE/THREONINE-PROTEIN KINASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	317-339	441-462							
PKR2_HSV2B	PROBABLE SERINE/THREONINE-PROTEIN KINASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	164-185	282-305							
PKR3_PRVNS	SERINE/THREONINE-PROTEIN KINASE 2	PSEUDORABIES VIRUS (STRAIN NIA-3)									

PCGENE	PICTLZIP	PROTEIN	ALL Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PKR2_VZVD	PROBABLE SERINE/THREONINE-PROTEIN KINASE	VIRUS	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	116-131	226-247	354-373						
PKR71_HSV1	GENE 73 PROTEIN KINASE	ICTALURID HERPESVIRUS 1		841-858								
PKR74_HSV1	GENE 74 PROTEIN KINASE	ICTALURID HERPESVIRUS 1		359-380	548-575							
PKR81_VACC	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN COPENHAGEN)		199-214								
PKR81_VACV	30 KD PROTEIN KINASE HOMOLOG	VACCINIA VIRUS (STRAIN WR)		199-214								
PKR81_VAV	30 KD PROTEIN KINASE HOMOLOG	VARIOLA VIRUS		199-214								
PKR81_SFVK	POSSIBLE PROTEIN KINASE C20	SHOPE FIBROMA VIRUS (STRAIN KASZA)		83-98								
PKR81_VACC	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN COPENHAGEN)		85-100								
PKR81_VACCP	POSSIBLE PROTEIN KINASE F10	VACCINIA VIRUS (STRAIN L-149)		52-67								
PKR81_VAV	POSSIBLE PROTEIN KINASE F10	VARIOLA VIRUS		85-100								
PKR85_AVISU	ROS TYR KINASE TRANSFORMING PROTEIN	AVIAN SARCOMA VIRUS (STRAIN UR2)		6-29	202-223	284-305						
PKR85_AVIR3	TYR-PROTEIN KINASE TRANSFORMING PROTEIN R	AVIAN RETROVIRUS RPL30		154-172	221-241							
PKR85_AVIR2	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SE	AVIAN ERYTHROBLASTOSIS VIRUS (STRAIN S13)		158-177								
PKR85_AVIS2	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PR2237)		361-377								
PKR85_AVISR	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN RASV1441)		361-377								
PKR85_AVIS3	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S1)		361-377								
PKR85_AVIS4	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN S2)		361-377								
PKR85_AVIS5	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN H-19)		361-377								
PKR85_AVIS6	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PRAGUE C)		361-377								
PKR85_AVIS7	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN PA1017)		358-374								
PKR85_AVIS8	TYR-PROTEIN KINASE TRANSFORMING PROTEIN SR	AVIAN SARCOMA VIRUS (STRAIN SCHMIDT-RUPPIN)		361-377								
PKR85_AVIS9	TYR-PROTEIN KINASE TRANSFORMING PROTEIN Y	AVIAN SARCOMA VIRUS (STRAIN Y73)		361-377								
PL100_ADE02	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 2		489-511								
PL100_ADE03	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 3		489-511								
PL100_ADE04	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 4		458-480								
PL100_ADE05	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 5		237-259								
PL100_ADE06	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 6		237-259								
PL100_ADE07	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7		237-259								
PL100_ADE08	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 8		237-259								
PL100_ADE09	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 9		237-259								
PL100_ADE10	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 10		237-259								
PL100_ADE11	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 11		237-259								
PL100_ADE12	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 12		237-259								
PL100_ADE13	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 13		237-259								
PL100_ADE14	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 14		237-259								
PL100_ADE15	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 15		237-259								
PL100_ADE16	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 16		237-259								
PL100_ADE17	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 17		237-259								
PL100_ADE18	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 18		237-259								
PL100_ADE19	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 19		237-259								
PL100_ADE20	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 20		237-259								
PL100_ADE21	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 21		237-259								
PL100_ADE22	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 22		237-259								
PL100_ADE23	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 23		237-259								
PL100_ADE24	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 24		237-259								
PL100_ADE25	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 25		237-259								
PL100_ADE26	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 26		237-259								
PL100_ADE27	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 27		237-259								
PL100_ADE28	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 28		237-259								
PL100_ADE29	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 29		237-259								
PL100_ADE30	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 30		237-259								
PL100_ADE31	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 31		237-259								
PL100_ADE32	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 32		237-259								
PL100_ADE33	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 33		237-259								
PL100_ADE34	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 34		237-259								
PL100_ADE35	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 35		237-259								
PL100_ADE36	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 36		237-259								
PL100_ADE37	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 37		237-259								
PL100_ADE38	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 38		237-259								
PL100_ADE39	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 39		237-259								
PL100_ADE40	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 40		237-259								
PL100_ADE41	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41		237-259								
PL100_ADE42	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 42		237-259								
PL100_ADE43	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 43		237-259								
PL100_ADE44	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 44		237-259								
PL100_ADE45	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 45		237-259								
PL100_ADE46	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 46		237-259								
PL100_ADE47	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 47		237-259								
PL100_ADE48	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 48		237-259								
PL100_ADE49	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 49		237-259								
PL100_ADE50	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 50		237-259								
PL100_ADE51	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 51		237-259								
PL100_ADE52	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 52		237-259								
PL100_ADE53	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 53		237-259								
PL100_ADE54	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 54		237-259								
PL100_ADE55	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 55		237-259								
PL100_ADE56	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 56		237-259								
PL100_ADE57	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 57		237-259								
PL100_ADE58	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 58		237-259								
PL100_ADE59	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 59		237-259								
PL100_ADE60	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 60		237-259								
PL100_ADE61	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 61		237-259								
PL100_ADE62	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 62		237-259								
PL100_ADE63	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 63		237-259								
PL100_ADE64	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 64		237-259								
PL100_ADE65	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 65		237-259								
PL100_ADE66	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 66		237-259								
PL100_ADE67	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 67		237-259								
PL100_ADE68	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 68		237-259								
PL100_ADE69	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 69		237-259								
PL100_ADE70	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 70		237-259								
PL100_ADE71	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 71		237-259								
PL100_ADE72	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 72		237-259								
PL100_ADE73	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 73		237-259								
PL100_ADE74	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 74		237-259								
PL100_ADE75	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 75		237-259								
PL100_ADE76	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 76		237-259								
PL100_ADE77	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 77		237-259								
PL100_ADE78	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 78		237-259								
PL100_ADE79	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 79		237-259								
PL100_ADE80	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 80		237-259								
PL100_ADE81	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 81		237-259								
PL100_ADE82	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 82		237-259								
PL100_ADE83	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 83		237-259								
PL100_ADE84	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 84		237-259								
PL100_ADE85	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 85		237-259								
PL100_ADE86	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 86		237-259								
PL100_ADE87	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 87		237-259								
PL100_ADE88	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 88		237-259								
PL100_ADE89	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 89		237-259								
PL100_ADE90	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 90		237-259								
PL100_ADE91	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 91		237-259								
PL100_ADE92	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 92		237-259								
PL100_ADE93	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 93		237-259								
PL100_ADE94	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 94		237-259								
PL100_ADE95	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 95		237-259								
PL100_ADE96	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 96		237-259								
PL100_ADE97	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 97		237-259								
PL100_ADE98	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 98		237-259								
PL100_ADE99	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 99		237-259								
PL100_ADE100	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 100		237-259								
PL100_ADE101	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 101		237-259								
PL100_ADE102	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 102		237-259								
PL100_ADE103	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 103		237-259								
PL100_ADE104	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 104		237-259								
PL100_ADE105	LATE 100 KD PROTEIN	HUMAN ADENOVIRUS TYPE 105		2								

PGCENE	PICTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNCAP INV	NUCLEOCAPSID PROTEIN	IMPATIENS NECROTIC SPOT VIRUS	155-179								
PNCAP MEASE	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN EDMONSTON)	40-59								
PNCAP MEASH	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN HALLE)	40-59								
PNCAP MEASY	NUCLEOCAPSID PROTEIN	MEASLES VIRUS (STRAIN YAMAGATA-1)	40-59								
PNCAP MUMPT	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	136-178								
PNCAP MUMPM	NUCLEOCAPSID PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	136-178								
PNCAP PHV	NUCLEOCAPSID PROTEIN	PROSPECT HILL VIRUS	36-58	218-236	256-277	321-346					
PNCAP PIHC	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	42-58	86-102							
PNCAP PIHW	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN WASHINGTON/1957)	42-58	86-102							
PNCAP PIB	NUCLEOCAPSID PROTEIN	BOVINE PARAINFLUENZA 3 VIRUS	163-184								
PNCAP PIH4	NUCLEOCAPSID PROTEIN	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	163-184								
PNCAP PIUMH	NUCLEOCAPSID PROTEIN	PUMALA VIRUS (STRAIN HALLNAS B1)	36-58	321-346							
PNCAP PIUMS	NUCLEOCAPSID PROTEIN	PUMALA VIRUS (STRAIN SOTRANO)	36-58	218-236	321-346						
PNCAP RABVA	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN AVO1)	299-322								
PNCAP RABVP	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN PV)	299-322								
PNCAP RABVS	NUCLEOCAPSID PROTEIN	RABIES VIRUS (STRAIN SAD B19)	299-322								
PNCAP RVFVZ	NUCLEOCAPSID PROTEIN	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12)	158-180								
PNCAP SENDS	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN Z HOST MUTANTS)	29-51	86-102							
PNCAP SENDE	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN ENDERS)	42-58	86-102							
PNCAP SENDH	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN HARRIS)	42-58	86-102							
PNCAP SENDZ	NUCLEOCAPSID PROTEIN	SENDAL VIRUS (STRAIN Z)	29-51	86-102							
PNCAP SEOUS	NUCLEOCAPSID PROTEIN	SEOL VIRUS (STRAIN SR-11)	112-138	317-342							
PNCAP SFVS	NUCLEOCAPSID PROTEIN	SANDFLY FEVER SICILIAN VIRUS	156-181								
PNCAP TACV	NUCLEOCAPSID PROTEIN	TACARIBE VIRUS	219-241								
PNCAP UUK	NUCLEOCAPSID PROTEIN	UKUKUNIEMI VIRUS	167-189								
PNCAP VHSV0	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN 07-71)	240-266								
PNCAP VHSV4	NUCLEOCAPSID PROTEIN	VIRAL HEMORRHAGIC SEPTICEMIA VIRUS (STRAIN MAKUH)	240-266								
PNCAP VSVJ0	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OG 64-80)									
PNCAP VSVJ1	NUCLEOCAPSID PROTEIN	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OG 64-80)									
PNEF H2R0	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	110-129								
PNEF H2R1	NEGATIVE FACTOR	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	106-128								
PNCAP IABDA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/BLACK DUCK/AUSTRALIA/702/78)	3-29								
PNCAP IACHI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/CHILE/1/83)	3-24								
PNCAP IADAI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/ALBERTA/28/76)	3-24								
PNCAP IADGE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/DUCK/GERMANY/49)	3-29								
PNCAP IAFVW	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/OWL PLAGUE VIRUS/WEYBRIDGE)	3-29	301-317							
PNCAP IAHCO	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/CORV/1974)	299-315								
PNCAP IAHK1	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/EQUINE/KENTUCKY/1/81)	3-29								
PNCAP IAKIE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/KEY/59/79)	3-24								
PNCAP IALEN	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/LENINGRAD/54/1)	3-24								
PNCAP IAMEI	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/NEWPHIS/1/71H-ABELL/AMY/42N)	3-30								
PNCAP IAPAK	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PARTOTULSTER/71)	3-30								
PNCAP IAPUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/74)	3-30								
PNCAP IARUE	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/74)	3-30								
PNCAP IASHZ	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/74)	3-29								
PNCAP IATKR	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/74)	3-29	56-77							
PNCAP IATRA	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/74)	3-29								
PNCAP IAUSS	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/PUERTO RICO/8/74)	3-29								
PNCAP IAWHM	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WHALEMAINE/1/84)	3-29								
PNCAP IAWIL	NEURAMINIDASE	INFLUENZA A VIRUS (STRAIN A/WILSON-SMITH/33)	3-30								
PNCAP INBBE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/BEIJING/1/87)	3-20								
PNCAP INBHK	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/HONG KONG/8/73)	3-20								
PNCAP INBLE	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LEB/40)	3-20								
PNCAP INBLN	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/LENINGRAD/1/9186)	3-20								
PNCAP INBMD	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/MARYLAND/59)	3-20								
PNCAP INBMF	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/NEWPHIS/1/89)	3-20								
PNCAP INBOR	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/OREGON/5/80)	3-20								

PCGENE	PIACTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PNRAM_INBS1	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/SINGAPORE/722/79)	3-20								
PNRAM_INBS2	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/USSR/00083)	3-20								
PNRAM_INBS3	NEURAMINIDASE	INFLUENZA B VIRUS (STRAIN B/VICTORIA/85)	3-20								
PNRS1_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	135-151								
PNRS2_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	2-26	196-221	783-806						
PNRS3_SIDEV	PROBABLE NONSTRUCTURAL PROTEIN PRECURSOR	BOMBYX DENSONUCLEOSIS VIRUS	60-78								
PNRS3_TSWVB	NON-STRUCTURAL PROTEIN	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNHI/BR-01)	80-105	431-455							
PNRS3_TSWVL	NUCLEOSIDE TRIPHOSPHATASE I	TOMATO SPOTTED WILT VIRUS (STRAIN L3)	80-105	436-458							
PNRP1_VACCC	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN COPENHAGEN)	20-45	387-403							
PNRP1_VACCV	NUCLEOSIDE TRIPHOSPHATASE I	VACCINIA VIRUS (STRAIN WR)	20-45	387-403							
PNRP1_VARV	NUCLEOSIDE TRIPHOSPHATASE I	VARIOLA VIRUS	293-309								
PP100_HSV6U	MAJOR ANTIGENIC STRUCTURAL PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	182-204	250-270	344-366						
PPAP2_FOWPV	POLY(A) POLYMERASE REGULATORY SUBUNIT	FOWLPOX VIRUS	79-100								
PPAP2_MYXVA	POLY(A) POLYMERASE REGULATORY SUBUNIT	MYXOMA VIRUS (ISOLATE AUSTRIARBA/VERG-86/1)	101-116								
PPAP2_VACCC	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN COPENHAGEN)	101-116								
PPAP2_VACCV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VACCINIA VIRUS (STRAIN WR)	101-116								
PPAP2_VARV	POLY(A) POLYMERASE REGULATORY SUBUNIT	VARIOLA VIRUS	101-116								
PPCNA_NPVAC	PROLIFERATING CELL NUCLEAR ANTIGEN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	67-89	227-244							
PPES1_NPVOP	21.2 KD PROTEIN IN PE 3 REGION	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	112-139								
PPES2_NPVAC	23.1 KD PROTEIN IN PE 26 INTERGENIC REGION	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	57-83								
PPES3_NPVAC	MAJOR IMMEDIATE EARLY PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	17-33								
PPEN3_ADE02	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 2	171-195								
PPEN3_ADE05	PENTON PROTEIN	HUMAN ADENOVIRUS TYPE 5	171-195								
PPEN3_ADE06	PENTON PROTEIN	AVIAN ADENOVIRUS GAL10 (STRAIN SA2)	194-214	307-324							
PPIV2_ADE07	MATURATION PROTEIN	HUMAN ADENOVIRUS TYPE 7	412-431								
PPIV2_ADE08	MATURATION PROTEIN	MOUSE ADENOVIRUS TYPE 1	409-428								
PPOL1_BAYMG	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	739-755	835-856	1072-1094	1889-1910					
PPOL1_BAYM	GENOME POLYPROTEIN 1	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	739-755	835-856	1072-1094	1465-1485	1888-1909				
PPOL1_GCMV	RNA1 POLYPROTEIN	HUNGARIAN GRAPEVINE CHROME MOSAIC VIRUS	691-717	1040-1062	1116-1143						
PPOL1_GFLV	RNA1 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	380-396	477-503	545-564	1079-1098	1149-1171	1341-1356	1761-1785	1821-1848	2020-2044
PPOL1_TBRVS	RNA1 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN 5)	1132-1159								
PPOL2_ARMV	RNA2 POLYPROTEIN	ARABIS MOSAIC VIRUS	129-150	243-266	346-367						
PPOL2_BAYMG	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (GERMAN ISOLATE)	325-350	463-485							
PPOL2_BAYM	GENOME POLYPROTEIN 2	BARLEY YELLOW MOSAIC VIRUS (JAPANESE STRAIN II-1)	325-350	463-485							
PPOL2_GFLV	RNA2 POLYPROTEIN	GRAPEVINE FANLEAF VIRUS	808-829	1021-1045							
PPOL2_TBRVS	RNA2 POLYPROTEIN	TOMATO BLACK RING VIRUS (STRAIN 5)	425-446	541-557	856-876	1203-1223					
PPOL2_TRSVR	RNA2 POLYPROTEIN	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY)	316-340	427-448	1527-1554						
PPOLG_BOVEV	GENOME POLYPROTEIN	BOVINE ENTEROVIRUS (STRAIN VG-5-27)	1833-1859								
PPOLG_BVDVN	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	627-653	943-965	1119-1134	1282-1297	1363-1387	1868-1892	2460-2487	2608-2628	2883-2898
PPOLG_BVDVS	GENOME POLYPROTEIN	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	3141-3161	3220-3241	3856-3871	3967-3986					
PPOLG_COXA2	GENOME POLYPROTEIN	COXSACKIEVIRUS A21 (STRAIN COE)	67-92								
PPOLG_COXA3	GENOME POLYPROTEIN	COXSACKIEVIRUS A23 (ECHO 9 VIRUS)	1491-1517	1601-1626							
PPOLG_COXA9	GENOME POLYPROTEIN	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1472-1498	1582-1607							
PPOLG_COXB1	GENOME POLYPROTEIN	COXSACKIEVIRUS B1	228-255	1475-1501	1585-1610						
PPOLG_COXB3	GENOME POLYPROTEIN	COXSACKIEVIRUS B3	821-846	1473-1499	1583-1608						
PPOLG_COXB4	GENOME POLYPROTEIN	COXSACKIEVIRUS B4	1475-1501	1585-1610							
PPOLG_COXB5	GENOME POLYPROTEIN	COXSACKIEVIRUS B5	918-943	1111-1138	1211-1236	1243-1260	1612-1628	2222-2248	2348-2365	2401-2426	3050-3069
PPOLG_DEN1S	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	918-943	1111-1138							
PPOLG_DEN1W	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	919-944	1112-1139							
PPOLG_DEN23	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (ISOLATE MALAYSIA M3)	336-354								
PPOLG_DEN26	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681)	848-868	919-944	1112-1139	1244-1261	1283-1301	1613-1629	2293-2318	2347-2364	2405-2425
PPOLG_DEN27	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK33)	2700-2726								
PPOLG_DEN28	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D7-04)	2405-2425	2700-2726							
PPOLG_DEN29	GENOME POLYPROTEIN	DENGUE VIRUS TYPE 2 (STRAIN D7-04)	848-868	919-944							

PCGENE	PICTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PPOLN_FCV6	NON-STRUCTURAL POLYPROTEIN	FELINE CALCIVIRUS (STRAIN CF/68 FIV)	443-469	748-766	902-923	1069-1088					
PPOLN_FCV4	NON-STRUCTURAL POLYPROTEIN	FELINE CALCIVIRUS (STRAIN JAPANESE F4)	300-326								
PPOLN_FCV9	NON-STRUCTURAL POLYPROTEIN	FELINE CALCIVIRUS (STRAIN F9)	171-186	262-283	919-945	1224-1242	1378-1399	1545-1564			
PPOLN_HEVBU	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN BURMA)	230-266	1274-1291							
PPOLN_HEVME	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MEXICO)	230-266	1272-1289							
PPOLN_HEVMY	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN MYANMAR)	230-266	1274-1291							
PPOLN_HEVPA	NON-STRUCTURAL POLYPROTEIN	HEPATITIS E VIRUS (STRAIN PAKISTAN)	249-265	1273-1290							
PPOLN_MIDDV	NON-STRUCTURAL POLYPROTEIN	MIDDELBOURG VIRUS	488-512	628-643	700-720						
PPOLN_ONNVG	NON-STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	90-107	613-634	2148-2163	2220-2240					
PPOLN_RHDV3	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS	156-180	270-292	209-220	479-502	1310-1353	1450-1455	1471-1490		
PPOLN_RHDV	NON-STRUCTURAL POLYPROTEIN	RABBIT HEMORRHAGIC DISEASE VIRUS (STRAIN V-351)	115-135								
PPOLN_RRVN	NON-STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB-5992)	89-106	611-632	2113-2128	2185-2205					
PPOLN_RRVT	NON-STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	782-797	854-874							
PPOLN_RUBVT	NON-STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THIERIEN)	14-37	97-113	263-279	670-694	901-918	1374-1393	2035-2052		
PPOLN_SFV	NON-STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	91-108	617-643	2062-2077	2134-2154					
PPOLN_SINDO	NON-STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDNHYN R2-5)	620-646	1123-1150	1790-1814	2148-2163	2220-2240				
PPOLN_SINDV	NON-STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAIN HNSP)	620-646	1123-1150	1744-1763	1790-1812	2146-2161	2218-2238			
PPOLR_EPMV	RNA REPLICASE POLYPROTEIN	EGGPLANT MOSAIC VIRUS	808-833								
PPOLR_OYAV	RNA REPLICASE POLYPROTEIN	ONONIS YELLOW MOSAIC VIRUS	707-727	941-962							
PPOLR_TMYV	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS	212-233	436-453	1173-1192						
PPOLR_TMYA	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (AUSTRALIAN ISOLATE)	212-233	436-453	1173-1192						
PPOLR_TMYC	RNA REPLICASE POLYPROTEIN	TURNIP YELLOW MOSAIC VIRUS (ISOLATE TYMC)	212-233	436-453	1173-1192						
PPOLS_EEEV	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	35-50	213-229	491-507						
PPOLS_EEVB	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-83)	32-48	229-245	504-522						
PPOLS_EEVT	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DON)	32-48	229-245	504-522						
PPOLS_IBDV3	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 5270)	900-922								
PPOLS_IBDVC	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN AUSTRALIAN 06)	900-922								
PPOLS_IBDV5	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN CU-1)	900-922								
PPOLS_IBDV6	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN PUG-98)	881-903								
PPOLS_IBDV7	STRUCTURAL POLYPROTEIN	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN STC)	900-922								
PPOLS_ONNVG	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULU)	688-708								
PPOLS_RRVT	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48)	1216-1243								
PPOLS_RUBVH	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN HPV77)	281-302								
PPOLS_RUBVM	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN M33)	280-301								
PPOLS_RUBVR	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (VACCINE STRAIN RA273)	281-302								
PPOLS_RUBVT	STRUCTURAL POLYPROTEIN	RUBELLA VIRUS (STRAIN THIERIEN)	281-302	1041-1060							
PPOLS_SFV	STRUCTURAL POLYPROTEIN	SEMLIKI FOREST VIRUS	35-59	751-772	780-801						
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	33-52								
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDBIS VIRUS (STRAINS HSP AND HRLP)	33-52								
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	36-51	909-933							
PPOL_BAEVM	POL POLYPROTEIN	BABOON ENDOGENOUS VIRUS (STRAIN M7)	526-544	973-993	999-1019	1070-1091					
PPOL_BIV67	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106)	101-119	742-768	868-889						
PPOL_BIV77	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127)	101-119	742-768	868-889						
PPOL_BIVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE)	487-504								
PPOL_BLV1	POL POLYPROTEIN (REVERSE TRANSCRIPTASE)	BOVINE LEUKEMIA VIRUS (JAPANESE ISOLATE BLV-1)	487-504								
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK)	393-419	656-671							
PPOL_CAMVC	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	184-204	380-407	471-494						
PPOL_CAMVD	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	175-199	375-402	466-489						
PPOL_CAMVE	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	184-204	380-407	471-494						
PPOL_CAMVN	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	70-97	185-205	381-408	472-495					
PPOL_CAMVS	ENZYMATIC POLYPROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	184-204	380-407	471-494						
PPOL_CERV	ENZYMATIC POLYPROTEIN	CARNATION ETCHED RING VIRUS	161-186	455-478							
PPOL_COYAV	PUTATIVE POLYPROTEIN	COMELINA YELLOW MOTTLE VIRUS	320-343	1286-1311	1606-1622	1641-1665					
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369)	437-456								
PPOL_EIAYC	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22)	437-456								

PCGENE	PICTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING)									
PPOL_FENV1	POL POLYPROTEIN	FELINE ENDOGENOUS VIRUS ECE1	383-401	836-876							
PPOL_FIVPE	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE PIETALUMA)	407-426	735-775							
PPOL_FIVSD	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE SAN DIEGO)	407-426	735-775							
PPOL_FIVT2	POL POLYPROTEIN	FELINE IMMUNODEFICIENCY VIRUS (ISOLATE TAZ)	406-425	665-690	755-775	1041-1060					
PPOL_FIVD	ENZYMATIC POLYPROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	191-212	464-487							
PPOL_FOAMV	POL POLYPROTEIN	HUMAN SPONARETROVIRUS	126-147	768-788							
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	59-80	971-991	1048-1071						
PPOL_HTLA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (STRAIN ATK)	310-346								
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE I (CARIBBEAN ISOLATE)	310-346								
PPOL_HTLV2	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE II	609-627								
PPOL_HVIA2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2SF2 ISOLATE)	860-887								
PPOL_HVIB1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ARV2SF2 ISOLATE)	635-660	872-899							
PPOL_HVIB3	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BH10 ISOLATE)	872-899								
PPOL_HVIBR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BHS ISOLATE)	872-899								
PPOL_HVIEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (BRU ISOLATE)	622-647	859-886							
PPOL_HVIEL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ELI ISOLATE)	622-647								
PPOL_HVIR2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (HXB2 ISOLATE)	860-887								
PPOL_HVIRJ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (JRC5F ISOLATE)	864-891								
PPOL_HVIMA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MAL ISOLATE)	859-886								
PPOL_HVIMN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (MN ISOLATE)	863-890								
PPOL_HVIND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NEW YORK-3 ISOLATE)	621-648	860-887							
PPOL_HVIND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (NDK ISOLATE)	622-647	859-886							
PPOL_HVIOY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (OVI ISOLATE)	860-887								
PPOL_HVIPV	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (PV22 ISOLATE)	635-660	872-899							
PPOL_HVIRH	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (RFRAT ISOLATE)	859-886								
PPOL_HV104	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (STRAN UGANDAN / ISO 859-886)	622-647	859-886							
PPOL_HV122	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (Z2/CDC-234 ISOLATE)	5-32								
PPOL_HV126	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE I (ZAIKE 6 ISOLATE)	379-406	907-934							
PPOL_HV2BE	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	886-913								
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAM2)	397-424	925-952							
PPOL_HV2D1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	907-934								
PPOL_HV2D2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	359-386	887-914							
PPOL_HV2G1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	543-564	771-792	887-914						
PPOL_HV2HZ	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	888-915								
PPOL_HV2RO	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	359-386	887-907							
PPOL_HV2SB	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	379-406	907-934							
PPOL_HV2ST	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	183-201	209-236	506-523	531-552	769-789				
PPOL_IPHA	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE	166-190	198-225	460-477						
PPOL_IPMA	PUTATIVE POL POLYPROTEIN	MURINE INTRACISTERNAL A-PARTICLE	183-201	209-236	506-523	531-552	769-789				
PPOL_IPMAJ	PROBABLE POL POLYPROTEIN	MURINE INTRACISTERNAL A-PARTICLE	102-120	128-155	407-423	425-442					
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET)	186-213	507-526	660-679						
PPOL_MCF3	POL POLYPROTEIN	MINK CELL FOCUS-FORMING MURINE LEUKEMIA VIRUS (ISOLATE CH37-53)	651-671	728-744							
PPOL_MLVAK	POL POLYPROTEIN	ACK MURINE LEUKEMIA VIRUS	315-354	978-998	1004-1024	1081-1097					
PPOL_MLVAV	POL POLYPROTEIN	CAS-BR-E MURINE LEUKEMIA VIRUS	64-84	90-110	167-183						
PPOL_MLVGB	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE 57)	340-359	983-1003	1009-1029	1086-1102					
PPOL_MLVF3	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE FB29)	340-359	983-1003	1009-1029	1086-1102					
PPOL_MLVFF	POL POLYPROTEIN	FRIEND MURINE LEUKEMIA VIRUS (ISOLATE PVC-211)	340-359	983-1003	1009-1029	1086-1102					
PPOL_MLVFP	POL POLYPROTEIN	MOLONEY MURINE LEUKEMIA VIRUS	315-354	978-998							
PPOL_MLVMO	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS	335-354	978-998	1004-1024	1081-1097					
PPOL_MLVRO	POL POLYPROTEIN	RADIATION MURINE LEUKEMIA VIRUS (STRAIN KAPLAN)	363-383	389-409	466-482						
PPOL_MLVVK	POL POLYPROTEIN	MURINE MAMMARY TUMOR VIRUS (STRAIN BR6)	711-751								
PPOL_MMTVB	POL POLYPROTEIN	SIMIAN MASON-PFIZER VIRUS	743-763								
PPOL_MPMAV	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMV)	369-395	469-488	632-647	1045-1063					
PPOL_OMVVS	POL POLYPROTEIN	ROUS SARCOMA VIRUS (STRAIN PRAGUE C)	719-742								
PPOL_RSPV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	891-915	1058-1083							
PPOL_RTBV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	891-915	1058-1083							
PPOL_RTBVP	POL POLYPROTEIN										

PCGENE	PICTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PPOL_SFV1	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 1)	188-204	335-356	845-869	976-996					
PPOL_SFV2	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	186-206	337-358	847-871	978-998					
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM155 ISOLATE)	895-915								
PPOL_SIVAG	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	711-726	900-920							
PPOL_SIVAI	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM7 CLONE GRI-1)	899-926								
PPOL_SIVAT	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE)	726-741	915-935							
PPOL_SIVCZ	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS	884-911								
PPOL_SIVGB	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GHI)	869-896								
PPOL_SIVM1	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (MM142-83 ISOLATE)	380-407	908-935							
PPOL_SIVAK	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE)	380-407	712-737	906-933						
PPOL_SIVS4	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (F236/SNH4 ISOLATE)	343-370	871-898							
PPOL_SIVSP	POL POLYPROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (PB/BC13 ISOLATE)	346-373	874-901							
PPOL_SIVRH	POL POLYPROTEIN	SQUIRREL MONKEY RETROVIRUS	748-768								
PPOL_SIVSAV	POL POLYPROTEIN	SIMIAN SARCOMA VIRUS	100-120	177-200							
PPOL_SIVSMV	ENZYMATIC POLYPROTEIN	SOYBEAN GILLOTIC MOTTLE VIRUS	131-155								
PPOL_SIVY1	POL POLYPROTEIN	SIMIAN RETROVIRUS	743-763								
PPOL_VLV	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514)	488-507	651-666	971-991						
PPOL_VLV1	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS1)	488-507	651-666	971-991						
PPOL_VLV2	POL POLYPROTEIN	VISNA LENTIVIRUS (STRAIN 1514 / CLONE LV1-1KS2)	488-507	651-666	971-991						
PP15_HCMVA	LARGE STRUCTURAL PHOSPHOPROTEIN PP150	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153-171	183-210							
PP28_HCMVA	28 KD STRUCTURAL PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	116-141								
PP41_HSV6G	PHOSPHOPROTEIN P41	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	158-175	396-411							
PP65_HCMVA	65 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	311-333								
PP65_HCMVA	64 KD LOWER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	301-323								
PP71_HCMVA	71 KD UPPER MATRIX PHOSPHOPROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	79-102								
PPR73_MMTVB	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	40-61								
PPR73_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PPR7L_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	44-65								
PPR7L_MMTVG	PROTEIN PR73	MOUSE MAMMARY TUMOR VIRUS (STRAIN GR)	40-61								
PRASH_MSVHA	TRANSFORMING PROTEINS P21 AND P29	HARVEY MURINE SARCOMA VIRUS	49-73								
PRASH_RRASV	TRANSFORMING PROTEINS P21 AND P29	RASHEED RAT SARCOMA VIRUS	56-80								
PREEP_CSV	REPEAT ELEMENT PROTEIN	CAMPOLETIS SONORENSIS VIRUS	14-36								
PREPR_VACCV	RIFAMPICIN RESISTANCE PROTEIN	VACCINIA VIRUS (STRAIN WR), AND (STRAIN COPENHAGEN)	274-298	316-335	517-535						
PREPR_VARV	RIFAMPICIN RESISTANCE PROTEIN	VARIOLA VIRUS	274-298	316-335	517-535						
PREV_SIVAG	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (AGM3 ISOLATE)	2-17								
PREV_SIVGB	REV PROTEIN	SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE GRI)	45-72								
PRUR1_ASFM2	RIBONUCLEOSIDE-DIPHOSPHATE REDUCTASE	AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1)	139-164	189-210	495-510						
PRUR1_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-4)	793-812								
PRUR1_HCMVA	RIBONUCLEOTIDE REDUCTASE	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	192-212	669-684							
PRUR1_HSV11	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	415-430	587-613							
PRUR1_HSVB	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP)	60-85	266-288	668-694						
PRUR1_HSVSA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	136-151								
PRUR1_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	36-51								
PRUR1_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	36-51								
PRUR1_VZVD	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	36-51								
PRUR1_VZVD	RIBONUCLEOTIDE REDUCTASE	VARIOLA VIRUS	36-51								
PRUR2_EBV	RIBONUCLEOTIDE REDUCTASE	EPSTEIN-BARR VIRUS (STRAIN B95-4)	209-236								
PRUR2_HSV11	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	44-66	275-292							
PRUR2_HSV1K	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	41-65	245-261	274-291						
PRUR2_HSV23	RIBONUCLEOTIDE REDUCTASE	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 331)	41-63	272-289							
PRUR2_HSVB3	RIBONUCLEOTIDE REDUCTASE	BOVINE HERPESVIRUS TYPE 1 (STRAIN 34)	244-266								
PRUR2_HSVB	RIBONUCLEOTIDE REDUCTASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP)	61-88	251-273							
PRUR2_HSVSA	RIBONUCLEOTIDE REDUCTASE	HERPESVIRUS SAIMIRI (STRAIN 11)	212-239								
PRUR2_SFVKA	RIBONUCLEOTIDE REDUCTASE	SHOPE FIBROMA VIRUS (STRAIN KASZA)	184-206	215-237							
PRUR2_VACCC	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	184-206								
PRUR2_VACCP	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN L-1VP)	184-206								
PRUR2_VACCV	RIBONUCLEOTIDE REDUCTASE	VACCINIA VIRUS (STRAIN WR)	184-206								

PCGENE	PICTLZIP	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	78-104	303-324	440-465	1096-1116	1317-1338	1343-1365	1539-1554	1869-1886	2001-2027
PRPPL_BUNTW	RNA POLYMERASE	BUNYAMWERA VIRUS	16-31	173-194	596-611	1561-1583	2081-2105				
PRPPL_EBOV	RNA-DIRECTED RNA POLYMERASE	EBOLA VIRUS	16-31	173-194	596-611	1561-1583	2081-2105				
PRPPL_HANTV	RNA POLYMERASE	HANTAN VIRUS (STRAIN 76-118)	151-168	173-194	596-611	1561-1583	2081-2105				
PRPPL_HRSV	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS	3-19	1181-1206	1425-1447	1633-1653	1979-1948	2018-2037			
PRPPL_HRSVA	RNA POLYMERASE BETA SUBUNIT	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	3-19	1181-1206	1425-1447	1633-1653	1979-1948	2018-2037			
PRPPL_MABVM	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN MUSOKE)	15-30	144-169	223-248	317-341	471-492	546-569	931-946	1042-1067	1410-1436
PRPPL_MABVP	RNA-DIRECTED RNA POLYMERASE	MARBURG VIRUS (STRAIN POPP)	1711-1731	1990-2017	2071-2094						
PRPPL_MEASE	RNA POLYMERASE BETA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	15-30	144-169	223-248	471-492	546-569	931-946	1042-1067	1410-1436	1677-1696
PRPPL_MUMPM	RNA POLYMERASE BETA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1715-1731	1805-1832	1990-2017	2071-2094	2223-2246				
PRPPL_NDVB	RNA POLYMERASE BETA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	285-312	617-632	998-1023	1160-1185	1279-1304	1920-1940	2038-2063		
PRPPL_PIZHT	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA)	43-66	110-135	265-288	962-988	1100-1124	1132-1153	1601-1622	2128-2143	
PRPPL_PJHHA	RNA POLYMERASE BETA SUBUNIT	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47883)	704-724	1571-1592	1967-1994	2040-2067					
PRPPL_PUDMH	RNA-DIRECTED RNA POLYMERASE	PUMALA VIRUS (STRAIN HALLINAS B1)	109-124	268-291	308-334	1309-1335	1562-1588	1985-2010	2215-2234		
PRPPL_RABVP	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN PV)	172-193	304-330	844-861	885-900	1848-1868	2068-2084	2111-2134		
PRPPL_RABVS	RNA POLYMERASE BETA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	266-286	542-563	741-762	1446-1461	1492-1517				
PRPPL_RDV	RNA-DIRECTED RNA POLYMERASE	RICE DWARF VIRUS	266-286	542-563	741-762	1446-1461	1492-1517	1744-1761			
PRPPL_RVFPVZ	RNA-DIRECTED RNA POLYMERASE	RIFT VALLEY FEVER VIRUS (STRAIN ZH-348 M12)	10-27	533-560	680-697	1293-1316					
PRPPL_SENDS	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	582-609	2009-2035							
PRPPL_SENDE	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN ENDERS)	64-83	104-120	194-218	844-861	885-900	1405-1420	1844-1864	2107-2128	
PRPPL_SENDZ	RNA POLYMERASE BETA SUBUNIT	SENDAI VIRUS (STRAIN Z)	14-38	664-681	705-720	1225-1240	1664-1684	1972-1948			
PRPPL_SEOUR	RNA-DIRECTED RNA POLYMERASE	SEOUL VIRUS (STRAIN 80-39)	64-83	104-120	194-218	844-861	885-900	1405-1420	1844-1864	2107-2128	
PRPPL_SVSWR	RNA POLYMERASE BETA SUBUNIT	SIMIAN VIRUS 5 (STRAIN 21004-WR)	151-168	173-194	596-611	1561-1585	2081-2105				
PRPPL_SVNV	RNA-DIRECTED RNA POLYMERASE	SONGHUS YELLOW NET VIRUS	43-66	108-124	263-289	1094-1118	1125-1147	1558-1580	2117-2137		
PRPPL_SWVB	RNA-DIRECTED RNA POLYMERASE	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE CPNH/BR-01)	126-146	391-406	605-627	704-731	863-883	886-911	1484-1510	1776-1792	
PRPPL_UUK	RNA POLYMERASE	UUKUNIEMI VIRUS	938-974	1385-1410	1778-1800	2609-2627	2678-2702				
PRPPL_VSVH	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN HA)	698-714	923-948	1404-1431	1570-1591	2060-2081				
PRPPL_VSVJO	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OC)	156-183	312-339	903-928	1956-1982	2080-2097				
PRPPL_VSVSI	RNA POLYMERASE BETA SUBUNIT	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	156-183	312-339	903-928	1956-1982	2080-2101				
PRPPL_ACLS	RNA-DIRECTED RNA POLYMERASE	APPLE CHLOROTIC LEAF SPOT VIRUS	156-182								
PRPPL_BWYVF	PUTATIVE RNA-DIRECTED RNA POL	BEE WESTERN YELLOW VIRUS (ISOLATE FL-1)	226-247	1036-1054	1132-1155	1775-1791					
PRPPL_BYDVI	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE MAY-PS1)	299-326	391-416	505-532						
PRPPL_BYDVP	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE PAV)	359-386	391-416	505-532						
PRPPL_BYDVR	PUTATIVE RNA-DIRECTED RNA POL	BARLEY YELLOW DWARF VIRUS (ISOLATE P-PAV)	359-386	391-416	505-532						
PRPPL_CARMV	PROBABLE RNA-DIRECTED RNA POL	CARNATION MOTTLE VIRUS	4-30	92-107	327-350	818-833					
PRPPL_CGMVS	PUTATIVE RNA-DIRECTED RNA POL	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN)	443-466	574-591	1017-1032	1523-1539					
PRPPL_CNV	PROBABLE RNA-DIRECTED RNA POL	CUCUMBER NECROSIS VIRUS	277-300	345-371	470-494						
PRPPL_CRV	PROBABLE RNA-DIRECTED RNA POL	CYMBIDIUM RINGSPOT VIRUS	96-111	345-371	470-494						
PRPPL_IPNVI	PUTATIVE RNA-DIRECTED RNA POL	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	221-238	597-613	639-682	988-1008	1234-1258	1770-1795	2077-2099		
PRPPL_LYCVV	RNA POLYMERASE	LYMPHOCTIC CHOROMENINGITIS VIRUS (STRAIN ARMSTRONG)	35-52								
PRPPL_MCMV	PROBABLE RNA-DIRECTED RNA POL	LYMPHOCTIC CHOROMENINGITIS VIRUS (STRAIN WE)	35-52								
PRPPL_PEARV	RNA-DIRECTED RNA POLYMERASE	PEA ENATION MOSAIC VIRUS	16-41	101-127	573-599						
PRPPL_PEARV	RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN I)	144-161	316-336	431-456	558-574					
PRPPL_PLRV	PUTATIVE RNA-DIRECTED RNA POL	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)	331-358	576-600							
PRPPL_PLRVW	PUTATIVE RNA-DIRECTED RNA POL	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN)	331-358	576-600							
PRPPL_PPMVS	PUTATIVE RNA-DIRECTED RNA POL	RED CLOVER NECROTIC MOSAIC VIRUS	375-395	702-726	1069-1096	1491-1507					
PRPPL_RGNMV	PUTATIVE RNA-DIRECTED RNA POL	REOVIRUS (TYPE 2 / STRAIN D/ONES)	278-300								
PRPPL_REOVI	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 1 / STRAIN LANG)	161-176								
PRPPL_ROTBR	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN RF)	132-156	247-269	844-861	904-921	942-967	1027-1046			
PRPPL_ROTBU	RNA-DIRECTED RNA POL SUBUNIT VP1	BOVINE ROTAVIRUS (STRAIN UK)	132-156	247-269	844-861	904-921	942-967	1027-1046			
PRPPL_ROTFC	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	198-223	254-274	318-337	769-784	856-878	936-952			
PRPPL_ROTGP	RNA-DIRECTED RNA POL SUBUNIT VP1	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	32-53	57-72	132-156	247-269	844-861	904-921	942-967	1027-1046	
PRPPL_ROTSI	RNA-DIRECTED RNA POL SUBUNIT VP1	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	132-156	247-269	844-861	904-921	942-967	1027-1046			
PRPPL_SBMV	PROBABLE RNA-DIRECTED RNA POL	SOUTHERN BEAN MOSAIC VIRUS	38-64	122-143	188-206	287-302	444-466	635-643	825-846		
PRPPL_TACV	RNA POLYMERASE	TACARIBE VIRUS	88-107	369-389	1281-1301	1676-1692	2019-2046				

PCGENE	PI2CLZIP	PROTEIN	All Virus (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PUL20 PVND	UL20 MEMBRANE PROTEIN HOMOLOG	PROTEIN	UL20 MEMBRANE PROTEIN (STRAIN NIA-3)	54-76								
PUL20 VZVD	GENE 39 MEMBRANE PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	201-224								
PUL21 HCMVA	HYPOTHETICAL PROTEIN UL21		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	91-110								
PUL21 HSV11	PROTEIN UL21		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	98-114	130-146							
PUL21 HSV1E	PROTEIN UL21		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN HFEM)	98-114	130-146							
PUL21 HSVEB	GENE 40 PROTEIN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	119-142	294-321	379-403	412-427					
PUL21 VZVD	GENE 38 PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	270-293	300-327							
PUL22 HCMVA	HYPOTHETICAL PROTEIN UL22		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	44-67								
PUL24 EBV	PROTEIN BCRF1		EPSTEIN-BARR VIRUS (STRAIN B95-8)	134-155								
PUL24 HCMVA	HYPOTHETICAL PROTEIN UL24		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	206-222								
PUL24 HSV11	PROTEIN UL24		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	147-166								
PUL24 ULVT	PROTEIN UL24 HOMOLOG		INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	158-179								
PUL25 HCMVA	HYPOTHETICAL PROTEIN UL25		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	484-500								
PUL25 HSV11	VIRION PROTEIN UL25		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	86-101								
PUL25 HSVEB	VIRION PROTEIN UL25		EQUINE HERPESVIRUS TYPE 1 (STRAIN A104P)	86-101	170-147							
PUL25 HSVSA	VIRION GENE 19 PROTEIN		HERPESVIRUS SAIMIRI (STRAIN 11)	244-265	344-368							
PUL25 ULVT	641 KD VIRION PROTEIN		INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	270-287	316-316							
PUL27 HCMVA	HYPOTHETICAL PROTEIN UL27		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	307-324	486-507							
PUL29 HCMVA	HYPOTHETICAL PROTEIN UL29		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	239-266								
PUL30 HCMVA	HYPOTHETICAL PROTEIN UL30		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	9-31								
PUL31 EBV	PROTEIN BFL2		EPSTEIN-BARR VIRUS (STRAIN B95-8)	273-296								
PUL31 HCMVA	HYPOTHETICAL PROTEIN UL31		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	410-437	582-602							
PUL31 HSV11	PROTEIN UL31		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	95-116								
PUL31 HSVEB	GENE 29 PROTEIN		HERPESVIRUS TYPE 1 (STRAIN AB4P)	104-125	288-309							
PUL31 HSVSA	GENE 69 PROTEIN		HERPESVIRUS SAIMIRI (STRAIN 11)	145-161	163-190							
PUL31 VZVD	GENE 27 PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-138	295-316							
PUL32 HSV11	PROBABLE MAJOR ENV GLYCOPROTEIN UL32		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	127-143	364-385							
PUL32 HSVEB	MAJOR ENVELOPE GLYCOPROTEIN 300		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	81-108								
PUL32 VZVD	PROBABLE MAJOR ENV GLYCOPROTEIN 26		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	553-574								
PUL33 HCMVA	G-PROTEIN COUPLED REC HOMOLOG UL33		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	76-102								
PUL34 HCMVA	HYPOTHETICAL PROTEIN UL34		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	214-232	297-321							
PUL34 HSV11	VIRION PROTEIN UL34		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	251-275								
PUL34 HSVEB	VIRION GENE 26 PROTEIN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	249-264								
PUL34 HSVSA	GENE 67 PROTEIN		HERPESVIRUS SAIMIRI (STRAIN 11)	207-229								
PUL34 VZVD	VIRION GENE 24 PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	244-266								
PUL35 HCMVA	HYPOTHETICAL PROTEIN UL35		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	229-252	310-329	331-348						
PUL36 HCMVA	HYPOTHETICAL PROTEIN UL36		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	143-168	387-410							
PUL37 EBV	PROTEIN BOLF1		EPSTEIN-BARR VIRUS (STRAIN B95-8)	21-36	135-155	707-730	984-1004					
PUL37 HSV11	PROTEIN UL37		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	229-252	262-277	445-467	665-681	758-777	925-947	1009-1028		
PUL37 HSVEB	GENE 23 PROTEIN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	414-440	491-510	664-690	778-805	901-919				
PUL37 HSVSA	GENE 63 PROTEIN		HERPESVIRUS SAIMIRI (STRAIN 11)	5-20								
PUL37 VZVD	GENE 21 PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	4-19	104-124	140-165	168-191	196-212	229-244	248-269	670-694	776-803
PUL38 HCMVA	HYPOTHETICAL PROTEIN UL38		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	904-923								
PUL40 HCMVA	HYPOTHETICAL PROTEIN UL40		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	199-220								
PUL41 HCMVA	HYPOTHETICAL PROTEIN UL41		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	18-35								
PUL41 HSV11	MEMBRANE PROTEIN UL41		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	15-31	116-134							
PUL41 HSVEB	GENE 17 MEMBRANE PROTEIN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	41-63	139-160	343-365	394-421					
PUL43 VZVD	GENE 15 MEMBRANE PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	88-114	121-146	160-180	277-299	374-400				
PUL43 HSV11	PROTEIN UL43		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	25-46								
PUL43 HSVIK	PROTEIN UL43		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	25-46								
PUL43 HSVIM	PROTEIN UL43		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN MP)	25-46								
PUL47 HCMVA	PROTEIN UL47		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	193-218	438-464	533-556	614-640	741-766				
PUL47 HSV11	VIRION PROTEIN UL47		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-425								
PUL47 HSVIF	VIRION PROTEIN UL47		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	404-425								
PUL47 HSVBP	80.7 KD ALPHA TRANS-INDUCING PROTEIN		BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	681-702								
PUL47 HSVB4	97 KD ALPHA TRANS-INDUCING PROTEIN		EQUINE HERPESVIRUS TYPE 4	580-601								

PCGENE	P12CLZIP	ALL Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PUL47_HSVB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	587-608								
PUL47_VZVD	ALPHA TRANS-INDUCING FACTOR 91 & 8 KD PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	42-58	608-627							
PUL49_EBV	HYPOTHETICAL BFR72 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	336-338								
PUL49_HCMVA	HYPOTHETICAL PROTEIN UL49	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	248-264	528-543							
PUL49_HSV11	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	226-252								
PUL49_HSVSA	HYPOTHETICAL GENE 66 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	232-253								
PUL50_HCMVA	PROTEIN UL50	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	96-119								
PUL51_HSV11	PROTEIN UL51	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	49-66								
PUL51_HSV4	GENE 8 PROTEIN	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	169-190								
PUL51_HSV10	GENE 8 PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	164-189								
PUL51_VZVD	GENE 7 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	30-49								
PUL52_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	44-59								
PUL52_HSV11	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	17-37	65-91							
PUL52_HSV4	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	8-27								
PUL52_HSVB	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN ADI 69)	8-27	135-159	316-337						
PUL52_HSVSA	PROBABLE DNA REPLICATION GENE 50 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	489-508	580-605							
PUL52_VZVD	PROBABLE DNA REPLICATION GENE 6 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	446-466	645-670							
PUL53_HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	173-188								
PUL53_HSV6U	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	64-80								
PUL60_HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	120-141								
PUL63_HCMVA	HYPOTHETICAL PROTEIN UL62	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	62-84	178-205							
PUL68_HCMVA	HYPOTHETICAL PROTEIN UL68	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	87-107								
PUL70_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	223-252	409-430	499-514	626-645	770-793				
PUL71_HCMVA	HYPOTHETICAL PROTEIN UL71	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	234-250								
PUL73_EBV	HYPOTHETICAL BLRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	62-87								
PUL73_HSVSA	HYPOTHETICAL GENE 53 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	51-73								
PUL74_HCMVA	HYPOTHETICAL PROTEIN UL74	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	12-32								
PUL77_HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	268-291	607-628							
PUL78_HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	71-90	190-205							
PUL79_HCMVA	HYPOTHETICAL PROTEIN UL79	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	40-58								
PUL84_HCMVA	65 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	100-116								
PUL84_HCMVT	65 KD EARLY NONSTRUCTURAL PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	100-116								
PUL87_EBV	HYPOTHETICAL PROTEIN B(C)RF1	EPSTEIN-BARR VIRUS (STRAIN B95-8)	406-422	530-557							
PUL87_HCMVA	HYPOTHETICAL PROTEIN UL87	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	205-231	309-335	606-628	633-653	757-781				
PUL87_HSV6U	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	301-322	507-529							
PUL87_HSVSA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	365-387	402-422	579-595						
PUL88_HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	173-191	252-279							
PUL88_HSV6U	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	150-173								
PUL90_HCMVA	HYPOTHETICAL PROTEIN UL90	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	35-50								
PUL91_HSV6U	HYPOTHETICAL PROTEIN 8R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	43-65								
PUL92_HCMVA	HYPOTHETICAL PROTEIN UL92	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	76-99								
PUL92_HSV6U	HYPOTHETICAL PROTEIN 9R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	36-55	100-119							
PUL94_HCMVA	PROTEIN UL94	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	49-70								
PUL95_EBV	HYPOTHETICAL PROTEIN BGLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8)	201-223								
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL95	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	508-526								
PUL95_HSV6U	HYPOTHETICAL PROTEIN 13R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	9-30	328-346							
PUL95_HSVSA	HYPOTHETICAL GENE 34 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-209								
PUL97_HCMVA	GANCICLOVIR KINASE	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	208-228	541-567							
PUL97_HSV6U	HYPOTHETICAL PROTEIN UL102	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	168-183								
PUL97_HSVSA	PROTEIN UL103	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	26-47								
PUL98_HCMVA	VIRION PROTEIN UL104	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	215-235	423-450							
PUL98_HCMVT	HYPOTHETICAL PROTEIN UL108	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	93-118								
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL111	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	60-81								
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL113	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	298-319								
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL117	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	178-195								
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	103-130								
PUL98_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	129-153								

PGENE	PICT12IP	PROTEIN	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS										
PULD2_HCMVA	HYPOTHETICAL PROTEIN UL132	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		4-22								
PUNG_FOWPI	URACIL-DNA GLYCOSYLASE	FOWLPOX VIRUS (STRAIN FP-1)		12-37								
PUNG_HSVB	URACIL-DNA GLYCOSYLASE	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)		224-250								
PUNG_VACCC	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)		82-103								
PUNG_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN WR)		82-103								
PUNG_VARV	URACIL-DNA GLYCOSYLASE	VARICELLA-ZOSTER VIRUS		82-103								
PUNG_V2VD	URACIL-DNA GLYCOSYLASE	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)		217-243								
PUS02_HSVB	GENE 68 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN KENTUCKY A)		48-63								
PUS02_HSVK	US1 PROTEIN	PSEUDORABIES VIRUS (STRAIN NIA-3)		120-136								
PUS02_PRYN3	PROTEIN US2 HOMOLOG	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		24-39								
PUS03_HCMVA	HQLF1 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)		53-70								
PUS05_HSV1	PUTATIVE GLYCOPROTEIN US5	HERPES SIMPLEX VIRUS (TYPE 2)		53-70								
PUS05_HSV2	PUTATIVE GLYCOPROTEIN US5	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		179-206								
PUS09_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		98-113								
PUS11_HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		29-50	113-135	195-222						
PUS12_HCMVA	HYPOTHETICAL PROTEIN HXLF6	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		11-33	208-231							
PUS13_HCMVA	HYPOTHETICAL PROTEIN HXLF3	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		236-260								
PUS14_HCMVA	HYPOTHETICAL PROTEIN HXLF4	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		378-402	443-466							
PUS15_HCMVA	HYPOTHETICAL PROTEIN HXLF7	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		151-174	243-267							
PUS16_HCMVA	HYPOTHETICAL PROTEIN HXLF2	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		110-126								
PUS17_HCMVA	HYPOTHETICAL PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		120-142	178-202	214-232						
PUS19_HCMVA	MEMBRANE PROTEIN HXLF4	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		41-67	155-182							
PUS21_HCMVA	HYPOTHETICAL PROTEIN HXLF2	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		270-292								
PUS22_HCMVA	EARLY NUCLEAR PROTEIN HXLF1	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		292-310								
PUS23_HCMVA	HYPOTHETICAL PROTEIN HXLF7	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		352-373								
PUS24_HCMVA	HYPOTHETICAL PROTEIN HXLF6	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		34-49	140-160							
PUS28_HCMVA	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		246-269								
PUS28_HCMVT	G-PROTEIN COUPLED REC HOMOLOG US28	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		102-128	208-233							
PUS29_HCMVA	HYPOTHETICAL PROTEIN HXRF4	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		41-59								
PUS30_HCMVA	HYPOTHETICAL PROTEIN HXRF5	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)		27-46								
PUS33_HCMVA	HYPOTHETICAL PROTEIN HXLF3	LILY SYMPTOMLESS VIRUS		28-49								
PV07K_LSV	7 KD PROTEIN	POTATO VIRUS S (STRAIN PERUVIAN)		31-48								
PV07K_NMV	7 KD PROTEIN	POTATO VIRUS X (PVX)		31-48								
PV07K_PVP	7 KD PROTEIN	POTATO VIRUS X (STRAIN X3)		31-48								
PV07K_PVCG	7 KD PROTEIN	POTATO VIRUS X (STRAIN XC) (STRAIN CP)		31-48								
PV117_ASELS	LIS 121-1 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN LIS57)		73-94								
PV121_ASELS	125 KD PROTEIN	ALFALEA MOSAIC VIRUS (STRAIN 425 / ISOLATE LEIDEN)		59-79								
PV12K_PNMR	12 KD PROTEIN	POTATO VIRUS M (STRAIN RUSSIAN)		79-96								
PV13K_TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)		24-51								
PV143_NPVAC	HELICASE	AUTOGRAFA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS		79-102	846-863	1013-1037						
PV14K_BSMV	14 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)		14-29	80-99							
PV18K_MLVAB	18 KD PROTEIN	ABELSON MURINE LEUKEMIA VIRUS		29-44	128-154							
PV19R_VACCV	PROTEIN B19	VACCINIA VIRUS (STRAIN WR)		114-132	152-172							
PV1A_BBMV	1A PROTEIN	BROAD BEAN MOTTLE VIRUS		196-220	752-771							
PV1A_BMV	1A PROTEIN	BROME MOSAIC VIRUS		747-767								
PV1A_CCMV	1A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS		744-763								
PV1A_CAVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY)		775-800								
PV1A_CAVO	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN O)		775-800								
PV1A_CAVQ	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q)		774-799								
PV1A_PSVI	1A PROTEIN	PEANUT STUNT VIRUS (STRAIN J)		472-493	783-808							
PV23K_HSVTH	23 5 KD PROTEIN	TURKEY HERPESVIRUS (STRAIN H2)		176-191								
PV28K_PLRV1	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN I1)		60-76	192-207							
PV28K_PLRVW	28 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN)		60-76	192-207							
PV29K_BWYVF	29 KD PROTEIN	BEEET WESTERN YELLOW VIRUS (ISOLATE FL-1)		22-43	136-157							
PV29K_PEBV	29 6 KD PROTEIN	PEA EARLY BROWNING VIRUS		114-132								
PV2A_BMV	2A PROTEIN	BROME MOSAIC VIRUS		285-303	759-777							

PGENE	FILE NAME	PICTLZIP	ALL Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVAL1	CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	55-74								
PVAL1	CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	55-74								
PVAL3	UCTV	ALI PROTEIN	BEET CURLY TOP VIRUS	82-108								
PVAL3	CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	77-97								
PVAL3	CLVN	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	77-97								
PVAL3	TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN NARMANDE)	78-97								
PVAL3	TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS	77-97								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	134-157								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	134-157								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	134-157								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	134-157								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN PV147)	134-157								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	134-157								
PVAL3	TYLCV	ALI PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	34-60								
PVAL3	TYLCV	ALI PROTEIN	CARNATION ETCHED RING VIRUS	141-161								
PVAL3	TYLCV	ALI PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	132-159								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-170								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	155-170								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	489-511								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	489-511								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	251-271								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	251-271								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	251-271								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	39-82								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	121-143								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	157-179								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	34-51								
PVAL3	TYLCV	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	34-51								
PVAL3	TYLCV	ALI PROTEIN	SQUASH LEAF CURL VIRUS	245-268								
PVAL3	TYLCV	ALI PROTEIN	ABUTILON MOSAIC VIRUS (ISOLATE WEST INDIA)	166-191								
PVAL3	TYLCV	ALI PROTEIN	BEAN GOLDEN MOSAIC VIRUS	166-191								
PVAL3	TYLCV	ALI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	193-218								
PVAL3	TYLCV	ALI PROTEIN	SQUASH LEAF CURL VIRUS	70-90								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	75-95								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	38-78								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-31								
PVAL3	TYLCV	ALI PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	98-123	179-197							
PVAL3	TYLCV	ALI PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	182-209								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	183-208								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	20-47								
PVAL3	TYLCV	ALI PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	14-30								
PVAL3	TYLCV	ALI PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	40-59								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	40-59								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	85-109								
PVAL3	TYLCV	ALI PROTEIN	SHOPE FIBROMA VIRUS (STRAIN KASZA)	42-64								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-64								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-64								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	41-68								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	301-326								
PVAL3	TYLCV	ALI PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-28								
PVAL3	TYLCV	ALI PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	148-172	366-381	1072-1095						

PCGENE	FILE NAME	PICTLZIP	ALL Viruses (No Bacteriophage)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
PVCAP_HCMVA	MAJOR CAPSID PROTEIN	PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	668-684	842-860	871-893						
PVCAP_HSV11	MAJOR CAPSID PROTEIN		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	283-302	358-384	1137-1152						
PVCAP_HSV1B	MAJOR CAPSID PROTEIN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	357-383	872-898							
PVCAP_HSV5A	MAJOR CAPSID PROTEIN		HERPESVIRUS SAIMIRI (STRAIN 11)	144-168	269-287	353-372	1002-1089					
PVCAP_HSV5	MAJOR CAPSID PROTEIN		PSEUDORABIES VIRUS (STRAIN INDIANA S)	335-362								
PVCAP_VZVD	MAJOR CAPSID PROTEIN		VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	381-401	891-910	1156-1176						
PVCG3_NPVAC	DNA-BINDING PROTEIN		AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	60-81								
PVD03_VACCC	PROTEIN D3		VACCINIA VIRUS (STRAIN COPENHAGEN)	12-39								
PVD03_VACCV	PROTEIN D3		VACCINIA VIRUS (STRAIN WR)	12-39								
PVD03_VARY	PROTEIN D3		VARIOLA VIRUS	12-39								
PVD05_FOWP1	92.6 KD PROTEIN		FOWLPOX VIRUS (STRAIN FP-1)	246-265	315-337							
PVD05_SFVKA	PROTEIN D5		SHOPE FIBROBLAST VIRUS (STRAIN KASZA)	54-78	171-198							
PVD05_VACCC	PROTEIN D5		VACCINIA VIRUS (STRAIN COPENHAGEN)	320-340	694-714	715-734						
PVD05_VACCV	PROTEIN D5		VACCINIA VIRUS (STRAIN WR)	320-340	694-714	715-734						
PVD05_VARY	PROTEIN D5		VARIOLA VIRUS	320-340	694-714	715-734						
PVDBP_CAMVC	DNA-BINDING PROTEIN		CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	37-56								
PVDBP_CAMVD	DNA-BINDING PROTEIN		CAULIFLOWER MOSAIC VIRUS (STRAIN DH)	37-56								
PVDBP_CAMVE	DNA-BINDING PROTEIN		CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	37-56								
PVDBP_CAMVN	DNA-BINDING PROTEIN		CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	37-56								
PVDBP_CAMVS	DNA-BINDING PROTEIN		CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	37-56								
PVE02_VACCC	PROTEIN E2		VACCINIA VIRUS (STRAIN COPENHAGEN)	70-97	355-380	540-558						
PVE02_VACCV	PROTEIN E2		VACCINIA VIRUS (STRAIN WR)	70-97	355-380	540-558						
PVE02_VARY	PROTEIN E2		VARIOLA VIRUS	70-97	355-380	540-558						
PVE05_VACCC	PROTEIN E5		VACCINIA VIRUS (STRAIN COPENHAGEN)	314-329								
PVE05_VACCD	PROTEIN E5		VACCINIA VIRUS (STRAIN DAIREN 1)	324-339								
PVE05_VACCV	PROTEIN E5		VACCINIA VIRUS (STRAIN WR)	324-339								
PVE05_VARY	PROTEIN E5		VARIOLA VIRUS	324-339								
PVE06_VACCC	PROTEIN E6		VACCINIA VIRUS (STRAIN COPENHAGEN)	430-451								
PVE06_VACCV	PROTEIN E6		VACCINIA VIRUS (STRAIN WR)	430-451								
PVE06_VARY	PROTEIN E6		VARIOLA VIRUS	430-451								
PVE08_VACCC	PROTEIN E8		VACCINIA VIRUS (STRAIN COPENHAGEN)	254-270								
PVE08_VACCV	PROTEIN E8		VACCINIA VIRUS (STRAIN WR)	254-270								
PVE08_VARY	PROTEIN E8		VARIOLA VIRUS	254-270								
PVE12_HPV16	PROBABLE E1 PROTEIN 2		HUMAN PAPILLOMA VIRUS TYPE 16	167-183								
PVE18_NPVAC	EARLY 18.5 KD PROTEIN		AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	106-133								
PVE1_BP1	E1 PROTEIN		BOVINE PAPILLOMA VIRUS TYPE 1	265-282	517-533							
PVE1_BP2	E1 PROTEIN		BOVINE PAPILLOMA VIRUS TYPE 2	265-281	516-532							
PVE1_CRPVK	E1 PROTEIN		COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	7-22								
PVE1_HPV11	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 11	258-275	311-334							
PVE1_HPV13	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 13	308-324								
PVE1_HPV18	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 18	264-281	317-333	344-364						
PVE1_HPV21	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 31	237-254								
PVE1_HPV33	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 33	238-260								
PVE1_HPV39	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 39	334-354								
PVE1_HPV41	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 41	363-380								
PVE1_HPV42	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 42	304-320								
PVE1_HPV58	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 58	238-260								
PVE1_HPV68	E1 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 68	258-275	311-334							
PVE1_PCPIV1	E1 PROTEIN		PGMAY CHIMPANZEE PAPILLOMA VIRUS TYPE 1	257-274	310-326							
PVE1_RHPV1	E1 PROTEIN		RHESUS PAPILLOMA VIRUS TYPE 1	286-309								
PVE2_CRPVK	PROBABLE E2 PROTEIN		COTTONTAIL RABBIT (SHOPE) PAPILLOMA VIRUS (STRAIN KANSAS)	308-333								
PVE2_HPV11	E2 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 11	285-310								
PVE2_HPV13	E2 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 13	295-320								
PVE2_HPV18	E2 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 18	288-306								
PVE2_HPV1A	E2 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 1A	284-300								
PVE2_HPV2A	E2 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 2A	311-336								
PVE2_HPV31	E2 PROTEIN		HUMAN PAPILLOMA VIRUS TYPE 31	294-312								

PGENE	PICTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	275-293								
PVE2 HPV33	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	289-307								
PVE2 HPV35	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	292-310								
PVE2 HPV39	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39	321-338								
PVE2 HPV42	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	303-328								
PVE2 HPV57	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	286-311								
PVE2 HPV68	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	333-351								
PVE2 PAPVD	PROBABLE E2 PROTEIN	DEER PAPILLOMAVIRUS	295-320								
PVE2 PCPV1	E2 PROTEIN	PRIMATE PAPILLOMAVIRUS TYPE 1	290-308								
PVE2 HPV1	E2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 1	39-59								
PVE4 HPV18	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 18	56-76								
PVE4 HPV41	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 41	59-83								
PVE4 HPV51	PROBABLE E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-87								
PVE4 HPV1	PROBABLE E4 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	19-42								
PVE5A HPV11	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 11	19-42								
PVE5A HPV6C	PROBABLE E5A PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 6C	2-26								
PVE5 HPV1	E5 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1, AND TYPE 2	19-42								
PVE5 HPV13	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	31-52								
PVE5 HPV31	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	45-65								
PVE5 HPV42	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	31-52								
PVE5 HPV51	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	89-113								
PVE5 HPV33	PROBABLE E5 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	109-132								
PVE5 HPV1	PROBABLE E5 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	23-41								
PVE4 BPV1	E4 PROTEIN	BOVINE PAPILLOMAVIRUS TYPE 1	6-23								
PVE4 CBPVK	E4 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	133-151								
PVE4 HPV68	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 8	8-27								
PVE4 HPV7A	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 7A	9-26								
PVE4 HPV33	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 33	9-26								
PVE4 HPV35	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 35	9-26								
PVE4 HPV31	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 31	8-27								
PVE4 HPV57	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 57	9-26								
PVE4 HPV58	E4 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	9-26								
PVE4 MPV	E4 PROTEIN	MICROMYS MINUTUS PAPILLOMAVIRUS	7-33								
PVE7 CBPVK	E7 PROTEIN	COTTONTAIL RABBIT (SHOPE) PAPILLOMAVIRUS (STRAIN KANSAS)	71-88								
PVE7 HPV13	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 13	77-93								
PVE7 HPV51	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	61-87								
PVE7 HPV68	E7 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 68	20-37								
PVE7 HPV1	E7 PROTEIN	RHESUS PAPILLOMAVIRUS TYPE 1	79-105								
PVE4 NPVAC	EARLY 94 KD PROTEIN	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	78-99	203-222							
PVEV BEV	ENVELOPE PROTEIN	TRICHOPLUSIA NI GRANULOSIS VIRUS	154-175	227-260	677-696						
PVEV DHV1	ENVELOPE GLYCOPROTEIN PRECURSOR	BERNE VIRUS	62-86	87-114							
PVEV EAV	PROBABLE ENVELOPE PROTEIN	DHORI VIRUS (STRAIN IND/ANI/11/61)	42-57	484-511							
PVEV LEV	PROBABLE ENVELOPE PROTEIN	EQUINE ARTERITIS VIRUS	25-41								
PVEV MCV1	MAJOR ENVELOPE PROTEIN	LELYSTAD VIRUS	27-47	148-168							
PVEV MCV2	MAJOR ENVELOPE PROTEIN	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 1	61-80								
PVEV THOCV	ENVELOPE GLYCOPROTEIN PRECURSOR	MOLLUSCUM CONTAGIOSUM VIRUS SUBTYPE 2	61-80	306-333							
PVEV NPVAC	ECOR-1 SITE PROTEIN ETM	THOGOTO VIRUS	196-221	356-383	473-491						
PVF5 VACC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	AUTOGRAPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	82-105								
PVF5 VACC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	280-305								
PVF5 VACC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN L-1VP)	280-305								
PVF5 VACC	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VACCINIA VIRUS (STRAIN WR)	281-306								
PVF5 VARV	36 KD MAJOR MEMBRANE PROTEIN PRECURSOR	VARIOLA VIRUS	280-305								
PVF9 VACC	PROTEIN F9	VACCINIA VIRUS (STRAIN COPENHAGEN), AND (STRAIN L-1VP)	176-200								
PVF9 VACC	PROTEIN F9	VACCINIA VIRUS (STRAIN WR)	176-200								
PVF9 VARV	PROTEIN F9	VARIOLA VIRUS	176-200								
PVF11 VACC	PROTEIN F11	VACCINIA VIRUS (STRAIN COPENHAGEN)	161-184								
PVF11 VARV	PROTEIN F11	VARIOLA VIRUS	161-184								
PVF13 VACC	PROTEIN F13	VACCINIA VIRUS (STRAIN COPENHAGEN)	25-48								

PCGENE	PICTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS									
PVF13 VACCP	PROTEIN F13	VACCINIA VIRUS (STRAIN L-IVP)	3-26								
PVF15 VARV	PROTEIN F15	VARIOLA VIRUS	28-51								
PVFPI FOWPV	PROTEIN FPI	FOWLPOX VIRUS	297-323								
PVFPI FOWPV	PROTEIN FPI	FOWLPOX VIRUS	88-104								
PVFPI CAPVK	PROTEIN F7	CAPRIPOX VIRUS (STRAIN KS-1)	89-111								
PVFPI FOWPV	PROTEIN FPI	FOWLPOX VIRUS	65-90								
PVFPI CAPVK	CFBA PROTEIN	CAPRIPOX VIRUS (STRAIN KS-1)	51-76								
PVFUS ORNZ	10 KD FUSION PROTEIN	ORF VIRUS (STRAIN NZ2)	29-48								
PVFUS VACC6	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR 65-16)	72-94								
PVG01 HSVEB	HYPOTHETICAL GENE 1 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	169-195								
PVG01 HSVI	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1	210-225	317-339	589-616						
PVG01 VACCC	PROTEIN G1	VACCINIA VIRUS (STRAIN COPENHAGEN)	298-318	376-395							
PVG01 VARV	PROTEIN G1	VACCINIA VIRUS (STRAIN WR)	237-257	315-334							
PVG01 VZVD	HYPOTHETICAL GENE 1 PROTEIN	VARIOLA VIRUS	298-318	376-395							
PVG01 VZVD	HYPOTHETICAL GENE 1 PROTEIN	VARIOLA VIRUS	58-82								
PVG03 VACCC	PROTEIN G3	VACCINIA VIRUS (STRAIN COPENHAGEN)	50-72								
PVG03 VARV	PROTEIN G3	VARIOLA VIRUS	50-72								
PVG04 VACCC	PROTEIN G4	VACCINIA VIRUS (STRAIN COPENHAGEN)	11-33								
PVG04 VARV	PROTEIN G4	VARIOLA VIRUS	11-33								
PVG06 VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-51								
PVG06 VARV	PROTEIN G6	VARIOLA VIRUS	31-51								
PVG08 HSVI	HYPOTHETICAL GENE 8 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	134-149	159-185							
PVG10 HSVI	HYPOTHETICAL GENE 10 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	35-54								
PVG10 HSVSA	HERPESVIRUS SAIMIRI	HERPESVIRUS SAIMIRI (STRAIN 11)	109-124	155-179							
PVG11 HSVI	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	101-122	150-176							
PVG12 HSVI	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1	151-178	270-286							
PVG12 HSVSA	HYPOTHETICAL GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-92								
PVG19 HSVI	HYPOTHETICAL GENE 19 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	88-112								
PVG19 AMEPV	GIL PROTEIN	AMSACTA MOOREI ENTOMOPOXVIRUS	313-336								
PVG1 SPVIR	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-RAA2 B	76-92	659-678							
PVG22 HSVI	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1	300-327								
PVG23 HSVI	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1	314-335								
PVG27 HSVI	HYPOTHETICAL GENE 27 PROTEIN	ICTALURID HERPESVIRUS 1	158-184								
PVG27 HSVSA	HYPOTHETICAL GENE 27 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	209-226								
PVG28 HSVI	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1	173-197	491-518							
PVG28 HSVSA	HYPOTHETICAL GENE 28 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	14-40								
PVG29 HSVI	HYPOTHETICAL GENE 29 PROTEIN	ICTALURID HERPESVIRUS 1	20-42								
PVG30 HSVI	HYPOTHETICAL GENE 30 PROTEIN	ICTALURID HERPESVIRUS 1	166-191								
PVG32 VZVD	GENE 32 PROTEIN	VARIOLA VIRUS	90-109								
PVG36 HSVSA	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN DUMAS)	108-123	344-362							
PVG37 HSVI	HYPOTHETICAL GENE 37 PROTEIN	ICTALURID HERPESVIRUS 1	284-299								
PVG39 HSVI	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1	648-675	970-990	1038-1065						
PVG40 HSVI	HYPOTHETICAL GENE 40 PROTEIN	ICTALURID HERPESVIRUS 1	14-32								
PVG41 HSVI	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1	11-38	62-81	244-260						
PVG43 HSVI	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1	109-133	157-178	322-345	521-538					
PVG46 HSVI	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1	134-156	580-607	917-963	1244-1270					
PVG48 HSVI	HYPOTHETICAL GENE 48 PROTEIN	ICTALURID HERPESVIRUS 1	71-93								
PVG50 HSVSA	PROB TRANSCRIPTION ACTIVATOR EDRP1	HERPESVIRUS SAIMIRI (STRAIN 11)	5-30	58-83							
PVG51 HSVI	HYP GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	29-49	84-102							
PVG52 HSVI	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1	229-252								
PVG53 HSVI	HYPOTHETICAL GENE 53 PROTEIN	ICTALURID HERPESVIRUS 1	22-37	143-158	288-309						
PVG55 HSVSA	HYPOTHETICAL GENE 55 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	85-106								
PVG56 HSVI	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1	1155-1176								
PVG58 HSVSA	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	130-146	266-288	293-319	330-346					
PVG59 HSVI	HYP GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1	142-161	267-289							
PVG5 SPV4	GENE 5 PROTEIN	SPIROPLASMA VIRUS 4	42-64								
PVG60 HSVI	HYPOTHETICAL GENE 60 PROTEIN	ICTALURID HERPESVIRUS 1	30-51	51-75							

PCGENE	PICTLZIP	All Viruses (No Bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS									
PVG61_HSV1	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1	76-102	117-116							
PVG63_HSV1	HYPOTHETICAL GENE 63 PROTEIN	ICTALURID HERPESVIRUS 1	238-259	336-363							
PVG64_HSV1	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1	420-445								
PVG65_HSV1	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1	117-137	155-173	362-378	518-533	1147-1174	1347-1369			
PVG67_HSV1	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1	108-132	171-188	318-344	722-745	1005-1029	1072-1091	1315-1341		
PVG6_SPV1R	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-RA2 B	60-82								
PVG70_HSV1	HYPOTHETICAL GENE 70 PROTEIN	ICTALURID HERPESVIRUS 1	184-209								
PVG71_HSV1	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	89-105								
PVG72_HSV1	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1	445-471	535-561	720-744	1252-1269					
PVG74_HSV1	G-PROTEIN COUPLED REC HOMOLOG ECKF3	HERPESVIRUS SAIMIRI (STRAIN 11)	124-151								
PVG9_SPV1R	GENE 9 PROTEIN	SPIROPLASMA VIRUS SPV1-RA2 B	57-72								
PVG1_BVB	F1 PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	1587-1606	1856-1877	2108-2127	2210-2226	2788-2806	2973-2999	3073-3090	3120-3145	3174-3199
PVG3_HCMVA	GLYCOPROTEIN H301 PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	3601-3623								
PVG1_CVPR8	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004/DK171511)	157-178								
PVG2_CVB1	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN F15)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVG2_CVB19	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN L9)	123-139	174-190	264-279	651-674	991-1017	1259-1280			
PVG2_CVB1Y	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN LY-138)	10-33	123-139	174-190	264-279	991-1017	1259-1280			
PVG2_CVB1M	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN MEUB)	123-139	174-190	264-279	991-1017	1259-1280				
PVG2_CVBQ	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN QUEBEC)	31-47	123-139	174-190	264-279	991-1017	1259-1280			
PVG2_CVBV	E2 GLYCOPROTEIN PRECURSOR	BOVINE CORONAVIRUS (STRAIN VACCINE)	123-139	174-190	264-279	991-1017	1259-1280				
PVG2_CVB22	E2 GLYCOPROTEIN PRECURSOR	HUMAN CORONAVIRUS (STRAIN 229E)	768-794	1033-1071	1115-1134						
PVG2_CVM4	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN WILD TYPE 4)	95-111	999-1025	1267-1290	1317-1338					
PVG2_CVM5	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN A39)	95-111	997-973	1215-1238	1265-1286					
PVG2_CVMJ	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM / VARIANT CL-2)	95-111	999-1025	1267-1290	1317-1338					
PVG2_CVMH	E2 GLYCOPROTEIN PRECURSOR	MURINE CORONAVIRUS MHV (STRAIN JHM)	95-111	858-884	1126-1149	1176-1197					
PVG2_CVPS	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 64-83)	442-457	806-816	1038-1064	1274-1297					
PVG2_CVPM1	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 64-83)	442-457	806-816	1038-1064	1274-1297					
PVG2_CVPR	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 64-83)	440-455	504-519	798-814	1036-1062	1272-1295				
PVG2_CVPU	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 64-83)	440-455	504-519	798-814	1036-1062	1272-1295				
PVG2_CVPR8	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN 86/137004 / BRITISH 1)	218-233	576-592	814-840	1050-1073					
PVG2_CVPRM	E2 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	218-233	576-592	814-840	1050-1073					
PVG2_CVPR1	E2 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 64-83)	440-455	504-519	798-814	1036-1062	1272-1295				
PVG2_F1P	E2 GLYCOPROTEIN PRECURSOR	FELINE INFECTIOUS PERITONITIS VIRUS (STRAIN 79-1146)	803-819	1041-1067	1277-1300						
PVG2_BV6	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 682)	196-219	388-407	771-797	1056-1081	1094-1111				
PVG2_BVB	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	195-218	387-406	770-796	1055-1080					
PVG2_BVD1	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D274)	196-219	388-407	771-797	1056-1081					
PVG2_BVD3	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN D3896)	196-219								
PVG2_BVVK	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB8523)	195-218	387-406	770-796	1055-1080					
PVG2_BVM	E2 GLYCOPROTEIN PRECURSOR	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41)	195-218	378-398	587-606	770-796	1055-1080				
PVG2_BVU1	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/12/82)	178-201								
PVG2_BVU2	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/14/86)	178-201								
PVG2_BVU3	E2 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/16/84)	178-201								
PVGLB_EBV	GLYCOPROTEIN GP10 PRECURSOR	EPSTEIN-BARR VIRUS (STRAIN B95-8)	732-752								
PVGLB_HCMVA	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	535-558	706-732	750-777						
PVGLB_HCMVT	GLYCOPROTEIN B PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	536-559	707-733	751-778						
PVGLB_HSV1	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	83-104								
PVGLB_HSV1K	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN F)	82-103								
PVGLB_HSV1P	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	82-103								
PVGLB_HSV2	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN PATTON)	83-104								
PVGLB_HSV2H	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 331)	79-99								
PVGLB_HSV2L	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN HG52)	79-99								
PVGLB_HSV2S	GLYCOPROTEIN B PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN SA8)	65-85								
PVGLB_HSV6U	GLYCOPROTEIN B (FRAGMENT)	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	72-92	117-144							
PVGLB_HSVB1	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1	560-578	689-707							
PVGLB_HSVB2	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 2 (STRAIN BMV)	279-299	745-767							
PVGLB_HSVBC	GLYCOPROTEIN B-1 PRECURSOR	BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	692-710								

PGENE	FILENAME	PROTEIN	P1CTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVGLB_HSV1	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (ISOLATE HVS25A) (EHV-1)	736-753								
PVGLB_HSV2	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (STRAIN ABI)	675-692								
PVGLB_HSV3	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (STRAIN ABI)	736-753								
PVGLB_HSV4	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	736-753								
PVGLB_HSV5	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	736-753								
PVGLB_HSV6	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (STRAIN RB-1B)	389-613								
PVGLB_HSV7	GLYCOPROTEIN B PRECURSOR			HERPESVIRUS SAMIRI (STRAIN 11)	483-506	584-602	701-716						
PVGLB_HSV8	GLYCOPROTEIN B PRECURSOR			INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN 632)	256-275	597-621	740-758						
PVGLB_HSV9	GLYCOPROTEIN B PRECURSOR			INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN SA-2)	266-285	607-631	750-768						
PVGLB_HSV10	GLYCOPROTEIN B PRECURSOR			INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	266-285	607-631	750-768						
PVGLB_HSV11	GLYCOPROTEIN B PRECURSOR			MURINE CYTOMEGALOVIRUS (STRAIN SMITH)	135-156	366-389	738-765						
PVGLB_HSV12	GLYCOPROTEIN B PRECURSOR			PSUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BIECKER)	201-218								
PVGLB_HSV13	GLYCOPROTEIN B PRECURSOR			VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	522-538								
PVGLB_HSV14	GLYCOPROTEIN B PRECURSOR			HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	3-22	467-493							
PVGLB_HSV15	GLYCOPROTEIN B PRECURSOR			HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN KOS)	3-22	467-493							
PVGLB_HSV16	GLYCOPROTEIN B PRECURSOR			HERPES SIMPLEX VIRUS (TYPE 2)	435-458								
PVGLB_HSV17	GLYCOPROTEIN B PRECURSOR			HERPES SIMPLEX VIRUS (TYPE 2 / STRAIN 333)	430-459								
PVGLB_HSV18	GLYCOPROTEIN B PRECURSOR			BOVINE HERPESVIRUS TYPE 1 (STRAIN COOPER)	475-494								
PVGLB_HSV19	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 4 (STRAIN 1942)	444-459								
PVGLB_HSV20	GLYCOPROTEIN B PRECURSOR			EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) AND (STRAIN KENTUCKY)	427-442								
PVGLB_HSV21	GLYCOPROTEIN B PRECURSOR			MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	399-421								
PVGLB_HSV22	GLYCOPROTEIN B PRECURSOR			MAREK'S DISEASE HERPESVIRUS (STRAIN RB-1B)	399-421								
PVGLB_HSV23	GLYCOPROTEIN B PRECURSOR			MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	398-420								
PVGLB_HSV24	GLYCOPROTEIN B PRECURSOR			MAREK'S DISEASE HERPESVIRUS (STRAIN ND5)	399-421								
PVGLB_HSV25	GLYCOPROTEIN B PRECURSOR			PSEUDORABIES VIRUS (STRAIN INDIANA-FUNKHAUSER / BIECKER)	180-197	446-472							
PVGLB_HSV26	GLYCOPROTEIN B PRECURSOR			VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	431-449								
PVGLB_HSV27	GLYCOPROTEIN B PRECURSOR			VARICELLA-ZOSTER VIRUS (STRAIN SCOTT)	431-449								
PVGLB_HSV28	GLYCOPROTEIN B PRECURSOR			HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	79-94								
PVGLB_HSV29	GLYCOPROTEIN B PRECURSOR			HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	104-129	413-437							
PVGLB_HSV30	GLYCOPROTEIN B PRECURSOR			VARICELLA-ZOSTER VIRUS (STRAIN DUNAS)	469-493								
PVGLB_HSV31	GLYCOPROTEIN B PRECURSOR			BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN A51908)	205-221	265-287	482-504						
PVGLB_HSV32	GLYCOPROTEIN B PRECURSOR			BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN COPENHAGEN)	205-221	265-280	484-506						
PVGLB_HSV33	GLYCOPROTEIN B PRECURSOR			BOVINE RESPIRATORY SYNCYTIAL VIRUS (STRAIN RB94)	205-221	265-280	484-506						
PVGLB_HSV34	GLYCOPROTEIN B PRECURSOR			CANINE DISTEMPER VIRUS (STRAIN ONDERSTPOORT)	316-361	398-414	562-589						
PVGLB_HSV35	GLYCOPROTEIN B PRECURSOR			HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP B / STRAIN 185)	205-221	265-280	484-506						
PVGLB_HSV36	GLYCOPROTEIN B PRECURSOR			HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	205-221	265-280	484-506						
PVGLB_HSV37	GLYCOPROTEIN B PRECURSOR			HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LO)	205-221	265-280	484-506						
PVGLB_HSV38	GLYCOPROTEIN B PRECURSOR			HUMAN RESPIRATORY SYNCYTIAL VIRUS (SUBGROUP A / STRAIN LO)	205-221	265-280	484-506						
PVGLB_HSV39	GLYCOPROTEIN B PRECURSOR			MEASLES VIRUS (STRAIN EDMONSTON) and (STRAIN HALLE)	224-245	286-302	451-477						
PVGLB_HSV40	GLYCOPROTEIN B PRECURSOR			MEASLES VIRUS (STRAIN YAMAGATA-1)	227-248	289-305	454-480						
PVGLB_HSV41	GLYCOPROTEIN B PRECURSOR			MUMPS VIRUS (STRAIN SBL-1)	5-20	276-292	446-467						
PVGLB_HSV42	GLYCOPROTEIN B PRECURSOR			MUMPS VIRUS (STRAIN RW)	276-292	446-467							
PVGLB_HSV43	GLYCOPROTEIN B PRECURSOR			MUMPS VIRUS (STRAIN SBL)	5-20	276-292	446-467						
PVGLB_HSV44	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/032)	273-289								
PVGLB_HSV45	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	273-289								
PVGLB_HSV46	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN HER/33)	273-289								
PVGLB_HSV47	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN B1-HITCHNER/47)	273-289								
PVGLB_HSV48	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN LAS/46)	273-289								
PVGLB_HSV49	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN MIYADARA/51)	273-289								
PVGLB_HSV50	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN QUEENSLAND/66)	273-289								
PVGLB_HSV51	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN TEXAS)	273-289								
PVGLB_HSV52	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN TEXAS G B /48)	273-289								
PVGLB_HSV53	GLYCOPROTEIN B PRECURSOR			NEWCASTLE DISEASE VIRUS (STRAIN ULSTER/67)	273-289								
PVGLB_HSV54	GLYCOPROTEIN B PRECURSOR			PHOCINE DISTEMPER VIRUS	269-285	305-326	367-383	531-558					

PGCENE	PICTZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVMA1_MEASH	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HALLE)	283-309								
PVMA1_MEAS1	MATRIX PROTEIN	MEASLES VIRUS (STRAIN IP-3-CA)	87-111								
PVMA1_MEASU	MATRIX PROTEIN	MEASLES VIRUS (STRAIN HU2)	283-309								
PVMA1_MUMPI	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL-1)	191-207	227-250	310-330						
PVMA1_MUMPS	MATRIX PROTEIN	MUMPS VIRUS (STRAIN SBL)	191-207	227-250	310-330						
PVMA1_NDVA	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/32)	135-151	190-208	309-329						
PVMA1_NDVB	MATRIX PROTEIN	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C/45)	135-151	190-208	309-329						
PVMA1_P1IHC	MATRIX PROTEIN	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	195-217								
PVMA1_P1IHT	MATRIX PROTEIN	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIIBA) (PIV-2)	132-154	189-205	308-328						
PVMA1_P14HA	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIIBA) (PIV-4A)	312-332								
PVMA1_P14HB	MATRIX PROTEIN	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN TOSHIIBA) (PIV-4B)	312-332								
PVMA1_RNDK	MATRIX PROTEIN	RINDERPEST VIRUS (STRAIN KABETE O)	200-221	239-260	383-309						
PVMA1_SENDF	MATRIX PROTEIN	SENDAI VIRUS (STRAIN FUSHIMI)	195-217								
PVMA1_SENDH	MATRIX PROTEIN	SENDAI VIRUS (STRAIN HARRIS)	195-217								
PVMA1_SENDZ	MATRIX PROTEIN	SENDAI VIRUS (STRAIN Z)	195-217								
PVMA1_SSPVB	MATRIX PROTEIN	SUBACUTE SCLEROSING PANENCEPHALITIS VIRUS (STRAIN BIKEN)	283-309	314-338							
PVMA1_SV41	MATRIX PROTEIN	SIMIAN VIRUS 41	132-154	189-205	308-328						
PVMA1_SV3	MATRIX PROTEIN	SIMIAN VIRUS 3 (STRAIN W3)	98-114	132-148	308-335						
PVMA1_SVCV	MATRIX PROTEIN	SPRING VIREMIA OF CARP VIRUS (RHADDOVIRUS CARPIA)	141-167								
PVMA1_TRTV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS	122-143								
PVME1_CVBM	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN MEBUS)	9-36	137-161	171-190						
PVME1_CVH22	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN 229E)	136-155								
PVME1_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	9-36	64-85	137-161						
PVME1_CVMA3	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	10-37								
PVME1_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN HM6)	10-37								
PVME1_CVPFS	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 174-193)	174-193								
PVME1_CVPPU	E1 GLYCOPROTEIN PRECURSOR	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONAVIRUS (STRAIN 169-193)	169-193	174-193							
PVME1_CVPRM	E1 GLYCOPROTEIN PRECURSOR	PORCINE RESPIRATORY CORONAVIRUS (STRAIN RM4)	174-193								
PVME1_CVTKK	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS	9-36	137-161	171-190						
PVME1_IBV6	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN 682)	74-98								
PVME1_IBVB	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE)	74-101								
PVME1_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE N42)	74-101								
PVME1_IBVK	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN KB5533)	74-98								
PVME1_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	131-157	178-203							
PVMP_CAMVC	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN CM-1841)	118-134	147-164	183-201						
PVMP_CAMVD	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN D/H)	118-134	147-164	183-201						
PVMP_CAMVE	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN BBC)	118-134	147-164	183-201						
PVMP_CAMVN	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN NY8153)	118-134	147-164	183-201						
PVMP_CAMVS	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN STRASBOURG)	118-134	147-164	183-201						
PVMP_CAMVW	MOVEMENT PROTEIN	CAULIFLOWER MOSAIC VIRUS (STRAIN W260)	118-134	147-164	183-201						
PVMP_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS	293-318								
PVMP_EMDV	MOVEMENT PROTEIN	FIGWORT MOSAIC VIRUS (STRAIN DXS)	115-131	180-198							
PVMP_SOCNV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	122-147	273-299							
PVMSA_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5)	201-228	269-295							
PVMSA_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA)	194-221	268-294							
PVMSA_HPBDD	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS	157-184	231-257							
PVMSA_HPBDS	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31)	194-221	269-295							
PVMSA_HPBDS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS	209-236	271-295	380-395						
PVMSA_HPBHE	MAJOR SURFACE ANTIGEN	HERON HEPATITIS B VIRUS	236-262	293-320							
PVMSA_HPBH0	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	11-28	70-96							
PVMSA_HPBH2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	185-202	244-270							
PVMSA_HPBH4	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADK4)	185-202	244-270							
PVMSA_HPBH9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-270								
PVMSA_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	174-191	233-259							
PVMSA_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	11-28	70-96							
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-259								
PVMSA_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	174-191	233-259							

PCGENE	PICTLZIP	All Viruses (No Bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILENAME	PROTEIN	VIRUS	173-197								
PVNUC_IABUD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ABUDGERIGARHOKKAI/077)	173-197								
PVNUC_IACAL	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ACALIFORNIA/1078)	173-197								
PVNUC_IACKG	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ACHICKENGERMANY/149)	173-197								
PVNUC_IACKP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ACHICKENPENNSYLVANIA/183)	173-197								
PVNUC_IADAU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKAUSTRALIA/749/80)	173-197								
PVNUC_IADBE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKBEIJING/178)	173-197								
PVNUC_IADCCZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKCZECHOSLOVAKIA/56)	173-197								
PVNUC_IADCI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKENGLAND/156)	173-197								
PVNUC_IADDE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKENGLAND/162)	173-197								
PVNUC_IADHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKHONG KONG/775)	173-197								
PVNUC_IADH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKMEXICO/287/4)	173-197								
PVNUC_IADMA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKMANITOBA/153)	173-197								
PVNUC_IADNZ	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKNEW ZEALAND/176)	173-197								
PVNUC_IADU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ADUCKUKRAINE/260)	173-197								
PVNUC_IADN3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AENGLAND/1955)	173-197								
PVNUC_IADOM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AFORT MONMOUTH/147)	173-197								
PVNUC_IADFW	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AFORT WARREN/150)	173-197								
PVNUC_IADPD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AFOWL PLAGUE VIRUS/DOBSON/DUTG)	173-197								
PVNUC_IADPR	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AFOWL PLAGUE VIRUS/ROSTOCK/34)	173-197								
PVNUC_IADRE	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGREY TEAL/AUSTRALIA/279)	173-197								
PVNUC_IAGUI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMARYLAND/577)	173-197								
PVNUC_IAGU2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMARYLAND/704/77)	173-197								
PVNUC_IAGU3	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMARYLAND/1824/78)	173-197								
PVNUC_IAGU4	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMARYLAND/1815/79)	173-197								
PVNUC_IAGUA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLASTRAKHAN/227/84)	173-197								
PVNUC_IAGUM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMASSACHUSETTS/268/80)	173-197								
PVNUC_IAGUN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMINNESOTA/945/80)	173-197								
PVNUC_IASHC	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AHICKOX/40)	173-197								
PVNUC_IASHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVEQUINE/JILLIN/189)	173-197								
PVNUC_IASHO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVEQUINE/LONDON/1416/73)	173-197								
PVNUC_IASHM	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVEQUINE/MIA/163)	173-197								
PVNUC_IASH1	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AHONG KONG/168)	173-197								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AHONG KONG/583)	173-197								
PVNUC_IASHP	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVEQUINE/PRAQUE/156)	173-197								
PVNUC_IASHB	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVEQUINE/TENNESSEE/586)	173-197								
PVNUC_IASHK	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AKIEV/597/9)	173-197								
PVNUC_IASHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ALENINGRAD/54/1)	173-197								
PVNUC_IASHA	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMALLARD/ASTRAKHAN/244/82)	173-197								
PVNUC_IASHAN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMALLARD/NEW YORK/6750/78)	173-197								
PVNUC_IASH6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AMINK/SWEDEN/84)	173-197								
PVNUC_IASH7	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ANTI/60/68)	173-197								
PVNUC_IASH8	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AOHIO/4/83)	173-197								
PVNUC_IASH9	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN APARROT/ULSTER/71)	173-197								
PVNUC_IASHU	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN APuerto RICO/834)	173-197								
PVNUC_IASHV	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ARUDDY TURNSTONE/NEW JERSEY/471)	173-197								
PVNUC_IASH0	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASEA/MASSACHUSETTS/1/80)	173-197								
PVNUC_IASH2	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASHEARWATER/AUSTRALIA/72)	173-197								
PVNUC_IASHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ASINGAPORE/157)	173-197								
PVNUC_IASHI	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATEALICELAND/29/80)	173-197								
PVNUC_IASHN	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATURKEY/MINNESOTA/166/81)	173-197								
PVNUC_IASHO	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATURKEY/ONTARIO/712/66)	173-197								
PVNUC_IASHS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATENN/SOUTH AFRICA/61)	173-197								
PVNUC_IASHT	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATERN/TURKMENIA/18/72)	173-197								
PVNUC_IASHX	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN ATXAS/1/77)	173-197								
PVNUC_IASHD	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AUDORN/30/72)	173-197								
PVNUC_IASHS	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AUSSR/90/77)	173-197								
PVNUC_IASH6	NUCLEOPROTEIN	INFLUENZA A VIRUS (STRAIN AVICTORIA/5/68)	173-197								

PCGENE	P12CLZLP	ALL Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP21_VZVD	PROBABLE CAPSID PROTEIN VP23	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	117-132								
PVP26_NPVAC	P26 PROTEIN	AUTOCORPHAL CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	12-31	58-76	117-141						
PVP2_AHSV4	OUTER CAPSID PROTEIN VP2	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4 / STRAIN VACCINE)	868-891	974-994							
PVP2_BTV10	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	361-381	399-424	564-586	829-849					
PVP2_BTV11	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	361-381	399-424	829-849						
PVP2_BTV13	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	362-382	420-438	617-632	657-676					
PVP2_BTV17	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	361-381								
PVP2_BTV1A	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	420-438	634-681							
PVP2_BTV1S	OUTER CAPSID PROTEIN VP2	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	14-31	117-140	420-438	654-681					
PVP2_EHDV1	OUTER CAPSID PROTEIN VP2	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	153-168	229-252							
PVP2_ROTBR	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN RF)	301-317	334-360	522-543	673-699	764-789				
PVP2_ROTBU	RNA-BINDING PROTEIN VP2	BOVINE ROTAVIRUS (STRAIN UK)	301-317	334-360	522-544	765-790					
PVP2_ROTINW	RNA-BINDING PROTEIN VP2	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	309-325	342-363	532-553	674-700	774-799				
PVP2_ROTIC	RNA-BINDING PROTEIN VP2	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	51-75	303-319	408-425	514-535	665-691				
PVP2_ROTIS1	RNA-BINDING PROTEIN VP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	34-57	219-240	302-318	335-360	523-544	674-700	765-790		
PVP10_MABVP	MINOR NUCLEOPROTEIN VP30	MARBURG VIRUS (STRAIN MUSOKE)	50-75								
PVP32_ASF7	PHOSPHOPROTEIN P32	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V)	174-197								
PVP33_EBOV	POLYMERASE COMPLEX PROTEIN VP33	EBOLA VIRUS	233-256								
PVP33_MABVM	POLYMERASE COMPLEX PROTEIN VP33	MARBURG VIRUS (STRAIN MUSOKE)	49-75	78-104							
PVP33_MABVP	POLYMERASE COMPLEX PROTEIN VP33	MARBURG VIRUS (STRAIN POPP)	49-75	78-104							
PVP33_VACCC	IMMUNODOMINANT ENVELOPE PROTEIN P33	VACCINIA VIRUS (STRAIN COPENHAGEN)	278-304								
PVP33_VACCV	IMMUNODOMINANT ENVELOPE PROTEIN P33	VACCINIA VIRUS (STRAIN WR)	278-304								
PVP33_VARV	IMMUNODOMINANT ENVELOPE PROTEIN P33	VARIOLA VIRUS	279-305								
PVP38_HSVMG	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN GA)	235-270								
PVP38_HSVAN	38 KD PHOSPHOPROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD1/750/R2)	235-270								
PVP39_NPVAC	MAJOR CAPSID PROTEIN	AUTOCORPHAL CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	296-311								
PVP39_NPVOP	MAJOR CAPSID PROTEIN	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYEDROSIS VIRUS	107-134	214-240	295-316						
PVP3_AHSV4	VP3 CORE PROTEIN	AFRICAN HORSE SICKNESS VIRUS (SEROTYPE 4/STRAIN VACCINE)	65-85	126-147	215-230	845-862					
PVP3_BTV10	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	123-144	212-227							
PVP3_BTV17	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	123-144	212-227							
PVP3_BTV1A	VP3 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	123-144	212-227							
PVP3_EHDV1	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	121-142	671-695							
PVP3_EHDV1A	VP3 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 2/STRAIN AUS)	121-142	675-695							
PVP3_RDV	MAJOR 114 KD STRUCTURAL PROTEIN	RICE DWARF VIRUS (RDV)	89-108	340-360	367-393	690-717	742-768	960-975			
PVP3_ROTFC	INNER CORE PROTEIN VP3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	405-429								
PVP40_EBV	CAPSID PROTEIN P40	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	401-425	426-444	512-536	796-822					
PVP40_HSV11	CAPSID PROTEIN P40	EPSTEIN-BARR VIRUS (STRAIN B95-8)	429-454								
PVP40_HSVB	CAPSID PROTEIN P40	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN AB4P)	141-168	472-492							
PVP40_HSVSA	CAPSID PROTEIN P40	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P)	50-67	95-119	483-504						
PVP40_ILTV1	CAPSID PROTEIN P40	HERPESVIRUS SADMIRI (STRAIN 11)	342-368								
PVP40_MABVM	MATRIX PROTEIN VP40	INFECTIOUS LARYNGITIS VIRUS (STRAIN THORNE V882)	506-528								
PVP40_MABVP	MATRIX PROTEIN VP40	MARBURG VIRUS (STRAIN MUSOKE)	95-110								
PVP40_NPVBM	STRUCTURAL GLYCOPROTEIN P40	MARBURG VIRUS (STRAIN POPP)	95-110								
PVP40_VZVD	CAPSID PROTEIN VP24	BOMBYX MORI NUCLEAR POLYEDROSIS VIRUS	223-242	236-272							
PVP41_ROT1	OUTER CAPSID PROTEIN VP4	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS)	47-64								
PVP42_ROT1	OUTER CAPSID PROTEIN VP4	AUTOCORPHAL CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	229-248	262-278							
PVP42_NPVAC	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	483-508								
PVP42_NPVOP	VIRAL TRANSCRIPTION REGULATOR P47	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	395-411	483-508							
PVP43_VARV	MAJOR CORE PROTEIN P48 PRECURSOR	AUTOCORPHAL CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	14-38								
PVP43_VACCC	MAJOR CORE PROTEIN P48 PRECURSOR	ORGYIA PSEUDOTSUGATA MULTICAPSID POLYEDROSIS VIRUS	136-157								
PVP43_VACCV	MAJOR CORE PROTEIN P48 PRECURSOR	VARIOLA VIRUS	273-288								
PVP43_VARY	MAJOR CORE PROTEIN P48 PRECURSOR	VACCINIA VIRUS (STRAIN COPENHAGEN)	331-358								
PVP4_BTV10	VP4 CORE PROTEIN	VACCINIA VIRUS (STRAIN WR)	331-358								
PVP4_BTV11	VP4 CORE PROTEIN	VARIOLA VIRUS	331-358								
PVP4_BTV13	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	174-193	233-249	545-561						
		BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	174-193	233-249	535-551						
		BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	174-193	233-249	535-551						

PCGENE	PICTLZIP	All Viruses (No. Bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7	AREA8	AREA9
FILE NAME	PROTEIN	VIRUS									
PVP4 BTVA	VP4 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	174-193	233-249	535-551						
PVP4 NCDV	OUTER CAPSID PROTEIN VP4	NEBRASKA CALF DIARRHEA VIRUS (STRAIN NCDV-LINCOLN)	483-508								
PVP4 RDV	NONSTRUCTURAL PROTEIN PNS4	RICE DWARF VIRUS	386-407	491-514	626-645						
PVP4 ROTB4	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN B641)	483-508								
PVP4 ROTBC	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN C486)	483-508								
PVP4 ROTBU	OUTER CAPSID PROTEIN VP4	BOVINE ROTAVIRUS (STRAIN UK)	483-508								
PVP4 ROTBH	OUTER CAPSID PROTEIN VP4	EQUINE ROTAVIRUS (STRAIN H-2)	226-250	483-508							
PVP4 ROTHI	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	181-207	234-249	482-507						
PVP4 ROTH5	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN RV-5)	181-207	234-249	482-507						
PVP4 ROTH6	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 69N1)	483-508								
PVP4 ROTH7	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DS1)	181-207	234-249	482-507						
PVP4 ROTHJ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN K8)	483-508	524-548							
PVP4 ROTHK	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN KU)	76-91	181-207	234-249	482-507					
PVP4 ROTHM	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (STRAIN L26)	181-207	234-249	482-507						
PVP4 ROTHN	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	181-207	234-249	482-507						
PVP4 ROTHQ	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN MCN13)	181-207	235-250	483-508						
PVP4 ROTHP	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	181-207	234-249	482-507						
PVP4 ROTHT	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST THOMAS 3)	181-207	234-249	482-507						
PVP4 ROTHV	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	181-207	482-507							
PVP4 ROTHW	OUTER CAPSID PROTEIN VP4	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	181-207	482-507							
PVP4 ROTPS	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	235-250	483-508							
PVP4 ROTPC	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	487-512								
PVP4 ROTPG	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	234-249	482-507							
PVP4 ROTPY	OUTER CAPSID PROTEIN VP4	PORCINE ROTAVIRUS (STRAIN YN)	235-250	483-508							
PVP4 ROTRH	OUTER CAPSID PROTEIN VP4	RHESUS ROTAVIRUS	483-508								
PVP4 ROTSF	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN S11-PEM)	483-508								
PVP4 ROTSS	OUTER CAPSID PROTEIN VP4	SIMIAN 11 ROTAVIRUS (STRAIN S11-SEM)	395-411	483-508							
PVP4 SBMV	P4 PROTEIN	SOUTHERN BEAN MOSAIC VIRUS	90-114								
PVP4 WTV	NONSTRUCTURAL PROTEIN PNS4	WOUND TUMOR VIRUS	192-215	416-438	498-519	564-591					
PVP5 BTV10	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	295-317	326-345	494-517						
PVP5 BTV11	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	295-317	326-345	494-517						
PVP5 BTV13	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	295-317	494-517							
PVP5 BTV1A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	87-102	295-317							
PVP5 BTV1S	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	295-317								
PVP5 BTV2A	OUTER CAPSID PROTEIN VP5	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	295-317								
PVP5 RDV	OUTER COAT PROTEIN P5	RICE DWARF VIRUS	265-284	622-639	690-715						
PVP61 BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	9-27	232-249	261-276						
PVP61 NPVAC	61 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	321-337	418-462							
PVP62 BTV10	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	5-23	257-272							
PVP62 MRDV	PROB NONSTRUCTURAL 36.3 KD PROTEIN	MAIZE ROUGH DWARF VIRUS	130-146								
PVP64 NPVOP	MAJOR ENV GLYCOPROTEIN PREC	ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	81-99	235-252	286-313						
PVP67 NPVAC	MAJOR ENV GLYCOPROTEIN PREC	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	84-102	238-255							
PVP67 NPVGM	MAJOR ENVELOPE GLYCOPROTEIN	GALLERIA MELLONELLA NUCLEAR POLYHEDROSIS VIRUS	155-172								
PVP6 BTV11	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	5-23	228-245	257-272						
PVP6 BTV13	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	5-23	228-245	257-272						
PVP6 BTV17	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	5-23	228-245	257-272						
PVP6 BTV1S	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	9-27	232-249	261-276						
PVP6 BTV2A	VP6 PROTEIN	BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	204-221	233-248							
PVP6 WTV	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS	374-397								
PVP6 WTVN1	STRUCTURAL PROTEIN P6	WOUND TUMOR VIRUS (STRAIN N1)	374-397								
PVP74 NPVAC	P74 PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	254-275								
PVP75 HVSVA	PROBABLE MEMBRANE ANTIGEN 75	HERPESVIRUS SAIMIRI (STRAIN 11)	127-147								
PVP79 NPVAC	79 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	274-301	405-420	678-704						
PVP7 BTV13	VP7 CORE PROTEIN	BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	197-222								
PVP7 BHDV1	VP7 CORE PROTEIN	EPIZOOTIC HEMORRHAGIC DISEASE VIRUS (SEROTYPE 1)	205-222	301-323							
PVP7 RDV	NONSTRUCTURAL PROTEIN PNS7	RICE DWARF VIRUS	400-416								
PVP7 WTV	NONSTRUCTURAL PROTEIN PNS7	WOUND TUMOR VIRUS	262-285								

PCGENE	FILE NAME	PROTEIN	PI2CT12/P	All Viruses (No Bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
PVP80 NPVAC	CAPSID PROTEIN P80			AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	571-123	638-660							
PVP81 NPVOP	CAPSID PROTEIN P87			ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	571-593								
PVP8 BTVI0	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 10 / ISOLATE USA)	104-120								
PVP8 BTVI1	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 11 / ISOLATE USA)	104-120								
PVP8 BTVI3	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 13 / ISOLATE USA)	104-120								
PVP8 BTVI7	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 17 / ISOLATE USA)	104-120								
PVP8 BTVI1A	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE AUSTRALIA)	104-120								
PVP8 BTVI5	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 1 / ISOLATE SOUTH AFRICA)	104-120								
PVP8 BTVI2A	NONSTRUCTURAL PROTEIN P8			BLUETONGUE VIRUS (SEROTYPE 2 / ISOLATE USA)	104-120								
PVP8 RDV	OUTER CAPSID PROTEIN P8			RICE DWARF VIRUS	374-400								
PVP8 RDV	OUTER CAPSID PROTEIN P8			RICE GALL DWARF VIRUS	177-202	216-242	198-425						
PVP8 VACC	STRUCTURAL PROTEIN P8 PRECURSOR			VACCINIA VIRUS (STRAIN COPENHAGEN)	225-242								
PVP8 VACC	STRUCTURAL PROTEIN P8 PRECURSOR			VACCINIA VIRUS (STRAIN WR)	225-242								
PVP8 VARV	STRUCTURAL PROTEIN P8 PRECURSOR			VARIOLE VIRUS	225-242								
PVP8 WTV	OUTER CAPSID PROTEIN P8			WOUND TUMOR VIRUS	111-129	214-241	251-271	379-405					
PVP8 RDV	NONSTRUCTURAL PROTEIN P8			RICE DWARF VIRUS	51-72								
PVP8 RDV	NONSTRUCTURAL PROTEIN P8			RICE GALL DWARF VIRUS	151-175								
PVP8 NPVAC	29 KD POLYHEDRAL ENVELOPE PROTEIN			AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	145-166	225-245							
PVP8 NPVOP	32 KD POLYHEDRAL ENVELOPE PROTEIN			ORGANIA PSEUDOTSUGATA MULTICAPSID POLYHEDROSIS VIRUS	122-144								
PVPRT ADEL2	ENDOPROTEASE			HUMAN ADENOVIRUS TYPE 12	161-181								
PVPRT MMTVB	PROTEASE			MOUSE MAMMARY TUMOR VIRUS (STRAIN BR6)	42-63								
PVPRT PMMV	PROTEASE			SIMIAN MASON-PFIZER VIRUS	80-99								
PVPRT SMRVH	PROTEASE			SQUIRREL MONKEY RETROVIRUS	256-271								
PVPRT SRV1	PROTEASE			SIMIAN RETROVIRUS SRV-1	80-99								
PVPV HV1B1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (B1110 ISOLATE HX113)	3-27								
PVPV HV1B8	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (B118 ISOLATE)	4-27								
PVPV HV1B1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRAIN ISOLATE)	3-28								
PVPV HV1B1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE)	3-27								
PVPV HV1E1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (FELI ISOLATE)	3-26								
PVPV HV1H2	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (I1112 ISOLATE)	4-27								
PVPV HV1J1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRC5F ISOLATE)	3-28								
PVPV HV1MA	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NAL ISOLATE)	2-27								
PVPV HV1MN	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NN ISOLATE)	3-20								
PVPV HV1ND	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE)	3-28								
PVPV HV1PV	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE)	3-27								
PVPV HV1S1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SF162 ISOLATE)	3-28								
PVPV HV1SC	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (SC ISOLATE)	3-28								
PVPV HV1Z2	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2CDC-214 ISOLATE)	3-28								
PVPV JSRV	VPU PROTEIN			SHEEP PULMONARY ADENOMATOSIS VIRUS (JAAGSIEKTE SHEEP RET)	24-45								
PVPX HV2BE	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE BEN)	10-32								
PVPX HV2CA	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAN2)	10-32								
PVPX HV2D1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D194)	10-32								
PVPX HV2D2	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE D205.7)	9-31								
PVPX HV2G1	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE GHANA-1)	10-32								
PVPX HV2H2	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2)	10-32								
PVPX HV2R0	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD)	10-32								
PVPX HV2S3	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE SBLISY)	10-32								
PVPX HV2ST	VPU PROTEIN			HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ST)	10-32								
PVPX LDV	VPU PROTEIN			LACTATE DEHYDROGENASE-ELEVATING VIRUS	145-165								
PVPX SIVAI	VPU PROTEIN			SIMIAN IMMUNODEFICIENCY VIRUS (ISOLATE AGM / CLONE GRI-1) (S66-84)	10-32								
PVPX SIVMI	VPU PROTEIN			SIMIAN IMMUNODEFICIENCY VIRUS (A11142-83 ISOLATE) (SIV-MAC)	10-32								
PVPX SIVAK	VPU PROTEIN			SIMIAN IMMUNODEFICIENCY VIRUS (K6W ISOLATE) (SIV-MAC)	10-32								
PVPX SIVML	VPU PROTEIN			SIMIAN IMMUNODEFICIENCY VIRUS (K78 ISOLATE) (SIV-MAC)	10-32								
PVPX SIVS4	VPU PROTEIN			SIMIAN IMMUNODEFICIENCY VIRUS (P226/SMH4 ISOLATE) (SOOTY M)	10-32								
PVPX SIVSP	VPU PROTEIN			SIMIAN IMMUNODEFICIENCY VIRUS (PB1/BC13 ISOLATE) (SOOTY M)	10-32								
PVRNA BSMV	ALPHA-A PROTEIN			BARLEY STRIPE MOSAIC VIRUS (BSMV)	290-312	904-929							
PVS05 ROTBR	NONSTRUCTURAL PROTEIN NCVP2			BOVINE ROTAVIRUS (STRAIN RT)	140-157	461-487							

PCGENE	PICTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILE NAME	PROTEIN	VIRUS	140-157	428-450	457-473						
PVS05 ROTHI	NONSTRUCTURAL PROTEIN NSVP2	HUMAN ROTAVIRUS (STRAIN IG-80-3)	NR-112								
PVS05 ROTPC	NONSTRUCTURAL PROTEIN NS3	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	399-414								
PVS05 ROTSI	NONSTRUCTURAL PROTEIN NSVP2	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	202-225								
PVS06 ROTBR	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN RF)	64-85								
PVS06 ROTBS	VP6 PROTEIN	BOVINE ROTAVIRUS (GROUP C / STRAIN SHINTOKU)	202-225								
PVS06 ROTBU	VP6 PROTEIN	BOVINE ROTAVIRUS (STRAIN UK)	202-225								
PVS06 ROTF	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN FI-14)	202-225								
PVS06 ROTEL	VP6 PROTEIN	EQUINE ROTAVIRUS (STRAIN H-2)	202-225								
PVS06 ROTGA	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	22-40								
PVS06 ROTGI	VP6 PROTEIN	ROTAVIRUS (GROUP B / STRAIN IDIR)	22-40								
PVS06 ROTHI	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	202-225								
PVS06 ROTHC	VP6 PROTEIN	HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	64-85								
PVS06 ROTHS	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	202-225								
PVS06 ROTHV	VP6 PROTEIN	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	202-225								
PVS06 ROTPC	VP6 PROTEIN	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	64-85	314-340							
PVS06 ROTPG	VP6 PROTEIN	PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	202-225								
PVS07 ROTBI	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN KN-4)	131-155								
PVS08 ROTPC	GLYCOPROTEIN VP7 PRECURSOR	PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	117-136								
PVS08 ROTSI	NONSTRUCTURAL PROTEIN NSVP4	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	274-295								
PVS09 ROTB6	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 6 / STRAIN 61A)	131-155								
PVS09 ROTB8	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN A44)	131-155								
PVS09 ROTBB	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 10 / STRAIN B223)	131-155								
PVS09 ROTBK	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (STRAIN K33)	131-155								
PVS09 ROTBT	GLYCOPROTEIN VP7	BOVINE ROTAVIRUS (SEROTYPE 1 / STRAIN T449)	131-155								
PVS09 ROTC7	GLYCOPROTEIN VP7	CHICKEN ROTAVIRUS A (SEROTYPE 7 / STRAIN CH2)	134-158								
PVS09 ROTEL	GLYCOPROTEIN VP7	EQUINE ROTAVIRUS (STRAIN L338)	131-155								
PVS09 ROTGI	GLYCOPROTEIN VP7 PRECURSOR	ROTAVIRUS (GROUP B / STRAIN IDIR)	205-232								
PVS09 ROTHA	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN RV-4)	131-155	197-212							
PVS09 ROTHB	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HUS)	197-212								
PVS09 ROTHD	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN DSI)	197-212								
PVS09 ROTHH	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN HNI26)	197-212								
PVS09 ROTHL	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (STRAIN L26)	131-155	197-212							
PVS09 ROTHM	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN M37)	131-155	197-212							
PVS09 ROTHO	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN MO AND STRAIN D)	131-155	197-212							
PVS09 ROTHP	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN P)	131-155								
PVS09 ROTHR	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 3 / STRAIN RVV)	131-155								
PVS09 ROTHS	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	197-212								
PVS09 ROTHV	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN VA70)	197-212								
PVS09 ROTW	GLYCOPROTEIN VP7	HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	131-155	197-212							
PVS09 ROTP1	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN OSU)	131-155	197-212							
PVS09 ROTP6	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 5 / STRAIN TFR-41)	131-155								
PVS09 ROTPB	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	197-212								
PVS09 ROTPM	GLYCOPROTEIN VP7	PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	197-212								
PVS09 ROTRH	GLYCOPROTEIN VP7	RHESUS ROTAVIRUS	131-155								
PVS09 ROTSI	GLYCOPROTEIN VP7	SIMIAN 11 ROTAVIRUS (STRAIN SA11)	131-155								
PVS11 ROTGA	NONSTRUCTURAL PROTEIN	ROTAVIRUS (GROUP B / STRAIN ADRV) (ADULT DIARRHEA ROTAVIRUS)	136-153								
PVSH HRSA	SMALL HYDROPHOBIC PROTEIN	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	16-41								
PVSH MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN SBL-1) AND MUMPS VIRUS (STRAIN SBL)	7-29								
PVSH MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 2 & 6)	7-29								
PVSH MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN EDINGBURGH 4)	7-29								
PVSH MUMPA	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MATSUJAMA)	10-29								
PVSH MUMPB	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BELFAST)	7-29								
PVSH MUMPE	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN ENDERS)	7-29								
PVSH MUMPI	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN JERYL-LYNN)	7-29								
PVSH MUMPK	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN KILHAM)	7-29								
PVSH MUMPL	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN BRISTOL 1)	6-29								
PVSH MUMPM	SMALL HYDROPHOBIC PROTEIN	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	10-29								

PCGENE	PIZCTLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS									
PYR81_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	190-223								
PYR82_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYR83_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYR84_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYR85_EBV	HYPOTHETICAL 24 0 KD PROTEIN	ORGANIA PSEUDOTUGATA MULTICAPSID POLYEDROSIS VIRUS (OP)	133-152								
PYR86_EBV	HYPOTHETICAL 18 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	82-99	140-156							
PYR87_EBV	HYPOTHETICAL 8 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	17-40	51-68							
PYR88_EBV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	21-43								
PYR89_EBV	HYPOTHETICAL 8 9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	28-46								
PYR90_EBV	HYPOTHETICAL 10 5 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	9-28								
PYR91_EBV	HYPOTHETICAL 11 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	37-54								
PYR92_EBV	HYPOTHETICAL 8 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	18-35								
PYR93_EBV	HYPOTHETICAL 8 6 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	5-26	36-52							
PYR94_EBV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	22-38	44-64							
PYR95_EBV	HYPOTHETICAL 9 2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	3-18	22-38	44-64						
PYR96_EBV	HYPOTHETICAL 8 8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	48-67								
PYR97_EBV	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	23-42								
PYR98_EBV	HYPOTHETICAL 14 3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	105-127								
PYR99_EBV	HYPOTHETICAL 9 0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	54-70								
PYR100_EBV	HYPOTHETICAL 8 2 L2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	150-166								
PYR101_EBV	HYPOTHETICAL 14 5 KD PROTEIN	CHLORIS STRIATE MOSAIC VIRUS	54-80								
PYR102_EBV	HYPOTHETICAL 18 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-125	141-162							
PYR103_EBV	HYPOTHETICAL 20 6 KD EARLY PROTEIN	HUMAN ADENOVIRUS TYPE 7	50-73								
PYR104_EBV	RNA-3 HYPOTHETICAL 24 7 KD PROTEIN	BEEF NECROTIC YELLOW VEIN MOSAIC VIRUS (ISOLATE F2)	163-188								
PYR105_EBV	HYPOTHETICAL 29 9 KD PROTEIN	AUTOGRAHA CALIFORNICA NUCLEAR POLYEDROSIS VIRUS	90-106								
PYR106_EBV	HYPOTHETICAL PROTEIN 2	SOYBEAN CHLOROTIC MOTTLE VIRUS	65-90								
PYR107_EBV	HYPOTHETICAL 31 7 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	122-142								
PYR108_EBV	HYPOTHETICAL 6 0 KD PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	23-44								
PYR109_EBV	HYPOTHETICAL 7 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	21-36								
PYR110_EBV	HYPOTHETICAL 7 0 KD PROTEIN	MEASLES VIRUS (STRAIN HALLE)	3-25								
PYR111_EBV	HYPOTHETICAL 8 7 KD PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	96-120								
PYR112_EBV	HYPOTHETICAL PROTEIN 8	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	80-105	155-173	543-565	657-675	764-784				
PYR113_EBV	HYPOTHETICAL 9 7 KD EARLY PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	10-27								
PYR114_EBV	HYPOTHETICAL 9 2 KD PROTEIN	HUMAN ADENOVIRUS TYPE 7	54-77								
PYR115_EBV	HYPOTHETICAL BALF1 PROTEIN	SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	16-41	62-77							
PYR116_EBV	HYPOTHETICAL BALF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	205-220								
PYR117_EBV	HYPOTHETICAL BAMH1-ORF1 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	354-374								
PYR118_EBV	HYPOTHETICAL BAMH1-ORF2 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	104-121								
PYR119_EBV	HYPOTHETICAL BAMH1-ORF3 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	49-67								
PYR120_EBV	HYPOTHETICAL BAMH1-ORF10 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	84-100								
PYR121_EBV	HYPOTHETICAL BAMH1-ORF12 PROTEIN	FOWLPOX VIRUS (ISOLATE HP-438[MUNICH])	114-134	154-169							
PYR122_EBV	BEL-3 PROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3)	113-128								
PYR123_EBV	BEL-3 PROTEIN	HUMAN SPINARETROVIRUS	52-78								
PYR124_EBV	HYPOTHETICAL 28 7 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	206-230								
PYR125_EBV	HYPOTHETICAL 9 3 KD PROTEIN IN DHFR 3'REGION	HERPESVIRUS SAIMIRI (SUBGROUP C / STRAIN 488)	69-90								
PYR126_EBV	HYPOTHETICAL EC-RF4 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	200-222								
PYR127_EBV	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN BC-1)	175-190								
PYR128_EBV	HYPOTHETICAL 23 6 KD PROTEIN	MAREK'S DISEASE HERPESVIRUS (STRAIN MD5)	175-190								
PYR129_EBV	HYPOTHETICAL PROTEIN HRL4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	101-121								
PYR130_EBV	HYPOTHETICAL HOST RANGE 27 4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPEHAGEN)	86-102								
PYR131_EBV	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONA VIRUS MHV	141-156								
PYR132_EBV	HYPOTHETICAL PROTEIN IN NUCLEOCAPSID ORF	MURINE CORONA VIRUS MHV	7-33								
PYR133_EBV	HYPOTHETICAL BKRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	67-90								
PYR134_EBV	HYPOTHETICAL 8 0 KD PROTEIN	HUMAN ADENOVIRUS TYPE 41	53-73								
PYR135_EBV	BMR2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	76-100	128-155	215-241	310-350					
PYR136_EBV	HYPOTHETICAL 15 9 KD PROTEIN	SIMULIUM IRIDESCENT VIRUS (INSECT IRIDESCENT VIRUS TYPE 22)	23-46								

PCGENE	PLICLZIP	All Viruses (No Bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7	AREA 8	AREA 9
FILENAME	PROTEIN	VIRUS	59-80								
PYOR1_ADEGI	HYPOTHETICAL 23 KD PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	59-80								
PYOR1_COYAV	HYPOTHETICAL 7.9 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	56-83								
PYOR2_TTVI	HYPOTHETICAL 13 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	23-49								
PYOR2_COYAV	HYPOTHETICAL 23.6 KD PROTEIN	COMMELINA YELLOW MOTTLE VIRUS	165-192								
PYOR2_EAV	HYPOTHETICAL 28.4 KD PROTEIN	EQUINE ARTERITIS VIRUS	196-212								
PYOR2_LLV	HYPOTHETICAL 11.8 KD PROTEIN	LELYSTAD VIRUS	71-92								
PYOR3_LVX	HYPOTHETICAL 4 KD PROTEIN	LILY VIRUS X	7-30								
PYOR3_NMV	HYPOTHETICAL 12 KD PROTEIN	NARCISSUS MOSAIC VIRUS	11-34								
PYOR3_PVX	HYPOTHETICAL 12 KD PROTEIN	POTATO VIRUS X	11-34								
PYOR3_PVXCP	HYPOTHETICAL 13 KD PROTEIN	POTATO VIRUS X (STRAIN CP)	9-29								
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN M)	11-34								
PYOR3_ADEGI	HYPOTHETICAL 31.5 KD PROTEIN	WHITE CLOVER MOSAIC VIRUS (STRAIN O)	9-31								
PYOR5_EAV	HYPOTHETICAL 28.7 KD PROTEIN	AVIAN ADENOVIRUS GALI (STRAIN PHELPS) (FOWL ADENOVIRUS 1)	69-86								
PYOR6_NMV	HYPOTHETICAL 10 KD PROTEIN	EQUINE ARTERITIS VIRUS	139-158								
PYOR6_TTVI	HYPOTHETICAL 16.6 KD PROTEIN	NARCISSUS MOSAIC VIRUS	10-26								
PYOR6_TTVI	HYPOTHETICAL 16.5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	13-32								
PYOR6_TTVI	HYPOTHETICAL 16.5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	16-39								
PYOR6_TTVI	HYPOTHETICAL 16.5 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	82-102	233-256							
PYOR6_TTVI	HYPOTHETICAL 20.2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1)	91-115								
PY24_KTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS	2-25	104-126							
PY24_KTBV	HYPOTHETICAL P24 PROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES)	2-25	104-126							
PY47_NPVAC	HYPOTHETICAL 41.5 KD PROTEIN IN P47 REGION	AUTOGRAFIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	211-234								
PY47_NPVOP	HYPOTHETICAL 12.2 KD PROTEIN IN P6 5'3' REGION	ORGYIA PSEUDOTUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP 82-108)	21-54	215-230							
PY47_NPVOP	HYPOTHETICAL 40.0 KD PROTEIN IN P6 5'3' REGION	ORGYIA PSEUDOTUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP 82-108)	21-54	215-230							
PY7B_TAVD	HYPOTHETICAL P7B PROTEIN	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	13-31								
PY40_NPVL	HYPOTHETICAL 8.5 KD PROTEIN IN POL 3' REGION	LYNAMPTIA DISPAR MULTICAPSID NUCLEAR POLYHEDROSIS VIRUS	16-35								
PYR1_HSV6D	HYPOTHETICAL PROTEIN RF1	HERPES SIMPLEX VIRUS (TYPE 6) (STRAIN GS)	42-66								
PYR2_HSV6G	HYPOTHETICAL PROTEIN RF2	HERPES SIMPLEX VIRUS (TYPE 6) (STRAIN GS)	55-74								
PYR3_HSV6G	HYPOTHETICAL PROTEIN RF3	HERPES SIMPLEX VIRUS (TYPE 6) (STRAIN GS)	32-56								
PYR1_IRV6	REPETITIVE PROTEIN ORF1	CHILLO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	20-43								
PYR4_IRV6	REPETITIVE PROTEIN ORF4	CHILLO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	44-69								
PYR5_IRV6	REPETITIVE PROTEIN ORF5	CHILLO IRIDESCENT VIRUS (CIV) (INSECT IRIDESCENT VIRUS TYPE 6)	98-123	179-204	260-285						
PYR1_EBV	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	199-223								
PYR2_EBV	HYPOTHETICAL BRRF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	164-182								
PYR1_EBV	HYPOTHETICAL BSF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	92-113								
PYR1_EBV	HYPOTHETICAL BTRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)	383-401								
PYR2_NPVOP	HYPOTHETICAL 24.0 KD PROTEIN	ORGYIA PSEUDOTUGATA MULTICAPSID POLYHEDROSIS VIRUS (OP 133-152)	82-99	140-156							
PYVAE_VACC	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	17-40	51-68							
PYVAL_VACC	HYPOTHETICAL 8.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-43								
PYVAL_VACC	HYPOTHETICAL 9.9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE 21-43)	28-46								
PYVAT_VACC	HYPOTHETICAL 8.9 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE 28-46)	9-28								
PYVBE_VACC	HYPOTHETICAL 10.5 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE 9-28)	37-54								
PYVAG_VACC	HYPOTHETICAL 11.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	18-35								
PYVAG_VACC	HYPOTHETICAL 8.0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	5-26	36-52							
PYVDA_VACC	HYPOTHETICAL 8.6 KD PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPE 5-26)	22-38	44-64							
PYVDA_VACC	HYPOTHETICAL 9.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	3-18	22-38	44-64						
PYVFA_VACC	HYPOTHETICAL 7.1 KD PROTEIN	VACCINIA VIRUS (STRAIN WR)	48-67								
PYVFF_VACC	HYPOTHETICAL 7.1 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	23-42								
PYVGA_VACC	HYPOTHETICAL 8.8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	105-127								
PYVGA_VACC	HYPOTHETICAL 14.3 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	34-70								
PYVXB_VACC	HYPOTHETICAL 9.0 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	150-166								
PYZL2_EBV	HYPOTHETICAL BZLF2 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8)									

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TABLE XIV

SEARCH RESULTS SUMMARY

FOR P23TLZIPC MOTIF

PCGENE	P31CTLZIP	FILENAME	PROTEIN	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PPOL2_TBRVS	PPOL2_TBRVS	RNA2 POLYPROTEIN	TBRVS	TOMATO BLACK RING VIRUS (STRAIN S) (TBRV)	617-651	1041-1077					
PPOL2_TRSVR	PPOL2_TRSVR	RNA2 POLYPROTEIN	TBRVS	TOMATO RINGSPOT VIRUS (ISOLATE RASPBERRY) (TOMRSV)	316-347						
PPOLG_BOVEV	PPOLG_BOVEV	GENOME POLYPROTEIN	BOVEV	BOVINE ENTEROVIRUS (STRAIN VG-5-27) (BEV)	1833-1866	2001-2037					
PPOLG_BVDVN	PPOLG_BVDVN	GENOME POLYPROTEIN	BVDVN	BOVINE VIRAL DIARRHEA VIRUS (ISOLATE NADL)	102-135	1650-1678	3220-3248				
PPOLG_BVDVS	PPOLG_BVDVS	GENOME POLYPROTEIN	BVDVS	BOVINE VIRAL DIARRHEA VIRUS (STRAIN SD-1)	102-135	1650-1678	3130-3158				
PPOLG_BYMV	PPOLG_BYMV	GENOME POLYPROTEIN	BYMV	BEAN YELLOW MOSAIC VIRUS	226-235						
PPOLG_COXA2	PPOLG_COXA2	GENOME POLYPROTEIN	COXA2	COXSACKIEVIRUS A21 (STRAIN COE)	1120-1157						
PPOLG_COXA3	PPOLG_COXA3	GENOME POLYPROTEIN	COXA3	COXSACKIEVIRUS A33 (ECHO 9 VIRUS) (EC-9-V)	67-99						
PPOLG_COXA9	PPOLG_COXA9	GENOME POLYPROTEIN	COXA9	COXSACKIEVIRUS A9 (STRAIN GRIGGS)	1601-1633						
PPOLG_COXB1	PPOLG_COXB1	GENOME POLYPROTEIN	COXB1	COXSACKIEVIRUS B1	1582-1614						
PPOLG_COXB3	PPOLG_COXB3	GENOME POLYPROTEIN	COXB3	COXSACKIEVIRUS B3	1585-1617						
PPOLG_COXB4	PPOLG_COXB4	GENOME POLYPROTEIN	COXB4	COXSACKIEVIRUS B4	1583-1615						
PPOLG_COXB5	PPOLG_COXB5	GENOME POLYPROTEIN	COXB5	COXSACKIEVIRUS B5	835-868	1585-1617					
PPOLG_DEN1S	PPOLG_DEN1S	GENOME POLYPROTEIN	DEN1S	DENGUE VIRUS TYPE 1 (STRAIN SINGAPORE S275/90)	1111-1145	1485-1519	2401-2434				
PPOLG_DEN1W	PPOLG_DEN1W	GENOME POLYPROTEIN	DEN1W	DENGUE VIRUS TYPE 1 (STRAIN WESTERN PACIFIC)	1112-1146						
PPOLG_DEN26	PPOLG_DEN26	GENOME POLYPROTEIN	DEN26	DENGUE VIRUS TYPE 2 (STRAIN 16681)	61-95	1112-1146					
PPOLG_DEN27	PPOLG_DEN27	GENOME POLYPROTEIN	DEN27	DENGUE VIRUS TYPE 2 (STRAIN 16681-PDK33)	61-95	1112-1146					
PPOLG_DEN2D	PPOLG_DEN2D	GENOME POLYPROTEIN	DEN2D	DENGUE VIRUS TYPE 2 (STRAIN D2-04)	61-95						
PPOLG_DEN2J	PPOLG_DEN2J	GENOME POLYPROTEIN	DEN2J	DENGUE VIRUS TYPE 2 (STRAIN JAMAICA)	61-95	1112-1146					
PPOLG_DEN2N	PPOLG_DEN2N	GENOME POLYPROTEIN	DEN2N	DENGUE VIRUS TYPE 2 (STRAIN NEW GUINEA C)	364-398						
PPOLG_DEN2P	PPOLG_DEN2P	GENOME POLYPROTEIN	DEN2P	DENGUE VIRUS TYPE 2 (STRAIN PR159/51)	61-95	1112-1146					
PPOLG_DEN2T	PPOLG_DEN2T	GENOME POLYPROTEIN	DEN2T	DENGUE VIRUS TYPE 2 (STRAIN TONGA 1974)	832-866						
PPOLG_DEN3	PPOLG_DEN3	GENOME POLYPROTEIN	DEN3	DENGUE VIRUS TYPE 3	61-95	2399-2432					
PPOLG_DEN4	PPOLG_DEN4	GENOME POLYPROTEIN	DEN4	DENGUE VIRUS TYPE 4	60-94						
PPOLG_EC1TG	PPOLG_EC1TG	GENOME POLYPROTEIN	EC1TG	ECHOVIRUS 11 (STRAIN GREGORY)	774-806						
PPOLG_EMCV	PPOLG_EMCV	GENOME POLYPROTEIN	EMCV	ENCEPHALOMYOCARDITIS VIRUS	1194-1226	1461-1501					
PPOLG_EMCVB	PPOLG_EMCVB	GENOME POLYPROTEIN	EMCVB	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-B NONDIABETOGENIC)	1196-1228	1465-1503					
PPOLG_EMCVD	PPOLG_EMCVD	GENOME POLYPROTEIN	EMCVD	ENCEPHALOMYOCARDITIS VIRUS (STRAIN EMC-D DIABETOGENIC)	1196-1228	1465-1503					
PPOLG_FMDV1	PPOLG_FMDV1	GENOME POLYPROTEIN	FMDV1	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A10-61) (APHITHOVIRUS A)	1036-1064	1098-1133	1167-1199	1465-1501			
PPOLG_FMDVA	PPOLG_FMDVA	GENOME POLYPROTEIN	FMDVA	FOOT-AND-MOUTH DISEASE VIRUS (STRAIN A12) (APHITHOVIRUS A)	1036-1074	1098-1133	1167-1199	1465-1501			
PPOLG_FMDVO	PPOLG_FMDVO	GENOME POLYPROTEIN	FMDVO	FOOT-AND-MOUTH DISEASE VIRUS (STRAINS OIK AND OIBF5)	1098-1133	1167-1199	1465-1501				
PPOLG_HCV1	PPOLG_HCV1	GENOME POLYPROTEIN	HCV1	HEPATITIS C VIRUS (ISOLATE 1) (HCV)	1640-1670						
PPOLG_HCV4	PPOLG_HCV4	GENOME POLYPROTEIN	HCV4	HOG CHOLERA VIRUS (STRAIN ALFORT) (SWINE FEVER VIRUS)	1363-1393	1560-1588	3131-3159				
PPOLG_HCV8	PPOLG_HCV8	GENOME POLYPROTEIN	HCV8	HOG CHOLERA VIRUS (STRAIN BRESCIA) (SWINE FEVER VIRUS)	102-135	1560-1588	3131-3159				
PPOLG_ICVIRK	PPOLG_ICVIRK	GENOME POLYPROTEIN	ICVIRK	HEPATITIS C VIRUS (ISOLATE IK) (HCV)	1640-1670						
PPOLG_ICV17	PPOLG_ICV17	GENOME POLYPROTEIN	ICV17	HEPATITIS C VIRUS (ISOLATE H) (HCV)	254-291						
PPOLG_HCVH4	PPOLG_HCVH4	GENOME POLYPROTEIN	HCVH4	HEPATITIS C VIRUS (ISOLATE HCV-476) (HCV)	711-742	1893-1924					
PPOLG_HCV18	PPOLG_HCV18	GENOME POLYPROTEIN	HCV18	HEPATITIS C VIRUS (ISOLATE HC-16) (HCV)	1640-1670						
PPOLG_HCV1A	PPOLG_HCV1A	GENOME POLYPROTEIN	HCV1A	HEPATITIS C VIRUS (ISOLATE HC-18) (HCV)	1640-1670						
PPOLG_HCV1T	PPOLG_HCV1T	GENOME POLYPROTEIN	HCV1T	HEPATITIS C VIRUS (ISOLATE HC-17) (HCV)	1640-1670						
PPOLG_HCV1W	PPOLG_HCV1W	GENOME POLYPROTEIN	HCV1W	HEPATITIS C VIRUS (ISOLATE HC-17) (HCV)	1640-1670						
PPOLG_HPAV2	PPOLG_HPAV2	GENOME POLYPROTEIN	HPAV2	HEPATITIS A VIRUS (STRAIN 24A)	1514-1550	2068-2099					
PPOLG_HPAV8	PPOLG_HPAV8	GENOME POLYPROTEIN	HPAV8	HEPATITIS A VIRUS (STRAIN 43C)	1514-1550	2068-2099					
PPOLG_HPAV18	PPOLG_HPAV18	GENOME POLYPROTEIN	HPAV18	HEPATITIS A VIRUS (STRAIN 18F)	1514-1550	2068-2099					
PPOLG_HPAV1H	PPOLG_HPAV1H	GENOME POLYPROTEIN	HPAV1H	HEPATITIS A VIRUS (STRAIN JIM-175)	1515-1551	2069-2100					
PPOLG_HPAV1M	PPOLG_HPAV1M	GENOME POLYPROTEIN	HPAV1M	HEPATITIS A VIRUS (STRAIN JIM-1A)	1515-1551	2069-2100					
PPOLG_HPAV1M	PPOLG_HPAV1M	GENOME POLYPROTEIN	HPAV1M	HEPATITIS A VIRUS (STRAIN JIMB)	1515-1551	2069-2100					
PPOLG_HPAV5	PPOLG_HPAV5	GENOME POLYPROTEIN	HPAV5	SIMIAN HEPATITIS A VIRUS (STRAIN AGM-27)	831-868	1517-1553					
PPOLG_HRV14	PPOLG_HRV14	GENOME POLYPROTEIN	HRV14	HUMAN RHINOVIRUS 14 (HRV-14)	1094-1132	2005-2041					
PPOLG_HRV1B	PPOLG_HRV1B	GENOME POLYPROTEIN	HRV1B	HUMAN RHINOVIRUS 1B (HRV-1B)	1453-1485	1816-1849	1983-2019				
PPOLG_HRV2	PPOLG_HRV2	GENOME POLYPROTEIN	HRV2	HUMAN RHINOVIRUS 2 (HRV-2)	1446-1475	1809-1842	1976-2012				
PPOLG_HRV89	PPOLG_HRV89	GENOME POLYPROTEIN	HRV89	HUMAN RHINOVIRUS 89 (HRV-89)	1460-1492	1823-1856	1990-2026				
PPOLG_HRV7	PPOLG_HRV7	GENOME POLYPROTEIN	HRV7	HUMAN ENTEROVIRUS 70 (STRAIN J67071)	1108-1145						
PPOLG_IBDV0	PPOLG_IBDV0	STRUCTURAL POLYPROTEIN	IBDV0	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN OII)	222-260						
PPOLG_JAEV1	PPOLG_JAEV1	GENOME POLYPROTEIN	JAEV1	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-14)	61-95	1233-1269	2779-2813	3274-3311			
PPOLG_JAEV3	PPOLG_JAEV3	GENOME POLYPROTEIN	JAEV3	JAPANESE ENCEPHALITIS VIRUS (STRAIN SA-VV)	61-95	1233-1269	2779-2813	3274-3311			

PC:LINE	P23CT121P	ALL Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILE NAME	PROTEIN	VIRUS	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
PPOLS_EEV1	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS	524-556						
PPOLS_EEV2	STRUCTURAL POLYPROTEIN	EASTERN EQUINE ENCEPHALITIS VIRUS (STRAIN VA31TEN BROECK)	525-557						
PPOLS_EEV3	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TC-8)	1203-1239						
PPOLS_EEV4	STRUCTURAL POLYPROTEIN	VENEZUELAN EQUINE ENCEPHALITIS VIRUS (STRAIN TRINIDAD DONKEY)	1203-1239						
PPOLS_OXNV1	STRUCTURAL POLYPROTEIN	ONYONG-NYONG VIRUS (STRAIN GULLU) (ONN)	1150-1182	1201-1235					
PPOLS_OXNV2	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN NB5092) (RRV)	1216-1250						
PPOLS_OXNV3	STRUCTURAL POLYPROTEIN	ROSS RIVER VIRUS (STRAIN T48) (RRV)	1216-1250						
PPOLS_SFV	STRUCTURAL POLYPROTEIN	SEMUKI FOREST VIRUS	1215-1251						
PPOLS_SINDO	STRUCTURAL POLYPROTEIN	SINDHIS VIRUS (SUBTYPE OCKELBO / STRAIN EDSBYN 82-5)	1197-1233						
PPOLS_SINDV	STRUCTURAL POLYPROTEIN	SINDHIS VIRUS (STRAINS HRSP AND HRLP)	1197-1233						
PPOLS_WEEV	STRUCTURAL POLYPROTEIN	WESTERN EQUINE ENCEPHALITIS VIRUS	1188-1224						
PPOL_BIV06	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 106) (BIV)	742-773						
PPOL_BIV27	POL POLYPROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	742-773						
PPOL_BIVAU	POL POLYPROTEIN	BOVINE LEUKEMIA VIRUS (AUSTRALIAN ISOLATE) (BLV)	343-374						
PPOL_CAEVC	POL POLYPROTEIN	CAPRINE ARTHRITIS ENCEPHALITIS VIRUS (STRAIN CORK) (CAEV)	206-240	322-355					
PPOL_COVNV	PUTATIVE POLYPROTEIN	COXMEJINA YELLOW MOTTLE VIRUS (COVMV)	1234-1267	1484-1518	1750-1788	1800-1831			
PPOL_EIAV9	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369) (EIAV)	166-198	506-539					
PPOL_EIACV	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	166-198	506-539					
PPOL_EIAVY	POL POLYPROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	166-198	505-538					
PPOL_FOANV	POL POLYPROTEIN	HUMAN SPUMARETROVIRUS (FOAMY VIRUS)	126-154						
PPOL_GALV	POL POLYPROTEIN	GIBBON APE LEUKEMIA VIRUS	348-378						
PPOL_HTLA	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (STRAIN ATK) (HTLV-1)	657-688						
PPOL_HTLIC	POL POLYPROTEIN	HUMAN T-CELL LEUKEMIA VIRUS TYPE 1 (CARIBBEAN ISOLATE) (HTLV-1)	657-688						
PPOL_HV1A2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ARV2/SF2 ISOLATE) (HIV-1)	331-364	500-537					
PPOL_HV1B1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BH10 ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HV1B5	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BHS ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HV1BR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (BRU ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HV1EL	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (ELI ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HV1H2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HXB2 ISOLATE) (HIV-1)	331-364	500-537					
PPOL_HV1JR	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (JRCF ISOLATE) (HIV-1)	335-368	504-541					
PPOL_HV1MA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (MAL ISOLATE) (HIV-1)	330-363						
PPOL_HV1NN	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NN ISOLATE) (HIV-1)	334-367	501-540					
PPOL_HV1NS	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NEW YORK-5 ISOLATE) (HIV-1)	331-364	500-537					
PPOL_HV1ND	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (NDK ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HV1OY	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (OVI ISOLATE) (HIV-1)	331-364	500-537					
PPOL_HV1P4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (PV22 ISOLATE) (HIV-1)	343-376	512-549					
PPOL_HV1R1	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (REF/AT ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HV1U4	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (STRAIN UGANDAN / ISOLATE)	330-363	499-536					
PPOL_HV1Z2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (Z2/CDC-234 ISOLATE) (HIV-1)	330-363	499-536					
PPOL_HV2CA	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE CAN2) (HIV-2)	353-386						
PPOL_HV2N2	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE NIH-2) (HIV-2)	353-386						
PPOL_HV2K0	POL POLYPROTEIN	HUMAN IMMUNODEFICIENCY VIRUS TYPE 2 (ISOLATE ROD) (HIV-2)	354-387						
PPOL_IP1A	PUTATIVE POL POLYPROTEIN	HAMSTER INTRACISTERNAL A-PARTICLE (IAP-H18)	460-496						
PPOL_JSRV	POL POLYPROTEIN	SHEEP PULMONARY ADENOMATOSIS VIRUS	186-220						
PPOL_MIMV	POL POLYPROTEIN	SIMIAN MONONUCLEAR VIRUS (MIMV)	650-681						
PPOL_OMVVS	POL POLYPROTEIN	OVINE LENTIVIRUS (STRAIN SA-OMVVS)	61-98	102-130	182-216	298-331			
PPOL_RTHV	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	788-824	891-919	1399-1433				
PPOL_RTHV1	POL POLYPROTEIN	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE: PHILIPPINES) (RTBV)	788-824	891-919	1399-1433				
PPOL_SFVJL	POL POLYPROTEIN	SIMIAN FOAMY VIRUS (TYPE 3 / STRAIN LK3) (SEV-3)	337-365						
PPOL_SIVC	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC1	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC2	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC3	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC4	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC5	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC6	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC7	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC8	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC9	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC10	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC11	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC12	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC13	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC14	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC15	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC16	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC17	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC18	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC19	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC20	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC21	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC22	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC23	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC24	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC25	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC26	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC27	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC28	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC29	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC30	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC31	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC32	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC33	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC34	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC35	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC36	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC37	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC38	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC39	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC40	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC41	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC42	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC43	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC44	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC45	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC46	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC47	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC48	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC49	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC50	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC51	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC52	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC53	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC54	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC55	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC56	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC57	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC58	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC59	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC60	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC61	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC62	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC63	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC64	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC65	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC66	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC67	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC68	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC69	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC70	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC71	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC72	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC73	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)	355-388	524-561					
PPOL_SIVC74	POL POLYPROTEIN	CHIMPANZEE IMMUNODEFICIENCY VIRUS (SIV(CPZ)) (CIV)							

PCGENE	PROJECT	PROTEIN	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PREP_CSV	PROTEIN	REPEAT ELEMENT PROTEIN	VIRUS	113-149						
PREP_BIV27	PROTEIN	REV PROTEIN	CANPOLETIS SONORENSIS VIRUS (CSV)	113-149						
PREV_EIAV9	PROTEIN	REV PROTEIN	BOVINE IMMUNODEFICIENCY VIRUS (ISOLATE 127) (BIV)	44-79						
PREV_EIAVC	PROTEIN	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE 1369) (EIAV)	44-79						
PREV_EIAV	PROTEIN	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (CLONE CL22) (EIAV)	44-79						
PREV_SIVAT	PROTEIN	REV PROTEIN	EQUINE INFECTIOUS ANEMIA VIRUS (ISOLATE WYOMING) (EIAV)	74-109						
PRIR1_A5FM2	PROTEIN	REV PROTEIN	SINIAN IMMUNODEFICIENCY VIRUS (TYO-1 ISOLATE) (SIV-AGM)	25-62						
PRIR1_HCNVA	PROTEIN	REV PROTEIN	AFRICAN SWINE FEVER VIRUS (ISOLATE NALAWI LIL 20/1) (ASFV)	630-666						
PRIR1_HSVB	PROTEIN	REV PROTEIN	HUMAN CYTOMEGALOVIRUS (STRAIN ADI 69)	279-311						
PRIR1_VACCC	PROTEIN	REV PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN ABAP) (EHV-1)	60-92						
PRIR1_VACCV	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	203-235						
PRIR1_VAVR	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN WR)	203-235						
PRIR1_VZVD	PROTEIN	REV PROTEIN	VARIOLA VIRUS	34-72						
PRMIL_AVEVR	PROTEIN	REV PROTEIN	VARIOLA VIRUS	149-177						
PRMIL_AVIII	PROTEIN	REV PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	133-161						
PRP4_VACCV	PROTEIN	REV PROTEIN	AVIAN RETROVIRUS IC10	399-427						
PRP4_VAVR	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN WR)	1005-1033						
PRP01_VACCV	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN WR)	297-333						
PRP01_CAPVK	PROTEIN	REV PROTEIN	CAPRIPOX VIRUS (STRAIN KS-1)	202-236						
PRP02_COWPX	PROTEIN	REV PROTEIN	COWPOX VIRUS (CPV)	342-578						
PRP02_VACCV	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN WR)	202-236						
PRP02_VAVR	PROTEIN	REV PROTEIN	VARIOLA VIRUS	202-236						
PRP07_VACCV	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN WR)	38-66						
PRP07_VAVR	PROTEIN	REV PROTEIN	VACCINIA VIRUS (STRAIN WR)	38-66						
PRP08_FOWP1	PROTEIN	REV PROTEIN	FOWLPOX VIRUS	57-88						
PRP0A_LELV	PROTEIN	REV PROTEIN	LELYSTAD VIRUS (LV)	1233-1268						
PRP01_EAV	PROTEIN	REV PROTEIN	EQUINE ARTERITIS VIRUS (EAV)	171-207						
PRP01_DHV11	PROTEIN	REV PROTEIN	DHORI VIRUS (STRAIN INDIAN/131361) (DHO)	96-125						
PRP01_JAV17	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AVICTORIA/375)	138-170						
PRP01_JNCJ1	PROTEIN	REV PROTEIN	INFLUENZA C VIRUS (STRAIN C/11/50)	364-398						
PRP02_JAANN	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AJANN ARBOR/660)	398-435						
PRP02_IADH2	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ADUCK/HOKKAIDO/80)	484-518						
PRP02_JAFR	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AGULLMAYLAND/04/77)	484-518						
PRP02_JAGU2	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AQUEIN/LONDON/14/673)	484-518						
PRP02_JAHL0	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ALENINGRAD/134/1757)	484-518						
PRP02_JAKOR	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ALENINGRAD/134/1757)	484-518						
PRP02_JALE1	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ALENINGRAD/134/1757)	484-518						
PRP02_JALE2	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ALENINGRAD/134/1757)	484-518						
PRP02_JAMAN	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AMALL ARD/NEW YORK/6/50/78)	484-518						
PRP02_JANT6	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ANTI/60/68)	484-518						
PRP02_JAPI0	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN API/TAI/ALBERTA/11/979)	484-518						
PRP02_JAPIE	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN API/TAI/ALBERTA/11/979)	484-518						
PRP02_JARUD	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ARUDDY TURNSTONE/NEW JERSEY/47/83)	484-518						
PRP02_JASIN	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASINGAPORE/1/57)	484-518						
PRP02_JATKM	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ATURKEY/MINNESOTA/833/80)	484-518						
PRP02_JAV17	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AVICTORIA/375)	484-518						
PRP02_JAWIL	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN AWILSON-SMITH/23)	484-518						
PRP02_JAZH2	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINEHONG KONG/81/78)	484-518						
PRP02_JAZH3	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINEHONG KONG/126/82)	484-518						
PRP02_JAZI1	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI2	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/TENNESSEE/26/7)	484-518						
PRP02_JAZI3	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI4	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI5	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI6	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI7	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI8	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI9	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI10	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI11	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI12	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI13	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI14	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI15	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI16	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI17	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI18	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI19	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI20	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI21	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI22	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI23	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI24	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI25	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI26	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI27	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI28	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI29	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI30	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI31	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI32	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI33	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI34	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI35	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI36	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI37	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI38	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI39	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI40	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI41	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI42	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI43	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI44	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI45	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI46	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI47	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI48	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI49	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI50	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI51	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI52	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI53	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI54	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI55	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI56	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI57	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI58	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI59	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI60	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI61	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI62	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI63	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI64	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI65	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI66	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI67	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI68	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI69	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI70	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI71	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI72	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI73	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI74	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI75	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI76	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI77	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI78	PROTEIN	REV PROTEIN	INFLUENZA A VIRUS (STRAIN ASWINE/IOVA/1/50)	484-518						
PRP02_JAZI79	PROTEIN	REV								

PCGENE	P3CTILZIP	PROTEIN	FILENAME	AREA1	AREA2	AREA3	AREA4	AREA5	AREA7
PRRP3_JAHPR	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/EQUINE/PRAQUE/156)	385-613					
PRRP3_JAMAN	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/MALLARD/NEW YORK/6750/78)	385-613					
PRRP3_JARUD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/RODDY TURNSTONE/NEW JERSEY/4785)	385-613					
PRRP3_JASEZ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/SEALMASSACHUSETTS/13/82)	385-613					
PRRP3_JATKM	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/TURKEY/MINNESOTA/83/80)	385-613					
PRRP3_JAZII	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/SPWINE/OWA/1590)	385-613					
PRRP3_JAZTE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA A VIRUS (STRAIN A/SPWINE/TENNESSEE/24/77)	385-613					
PRRP3_JNBAC	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (COLD-ADAPTED))	735-769					
PRRP3_JNBAD	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA B VIRUS (STRAIN B/ANN ARBOR/1/66 (WILD-TYPE))	735-769					
PRRP3_JNCBE	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA C VIRUS (STRAIN C/BERLIN/1/85)	609-641					
PRRP3_JNCJJ	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	INFLUENZA C VIRUS (STRAIN C/31/50)	609-641					
PRRP3_JTHGV	RNA-DIRECTED RNA POLYMERASE SUBUNIT P3	YIRUS	THOGOTO VIRUS (THO)	109-145	324-356				
PRRP3_CVH22	RNA-DIRECTED RNA POLYMERASE	YIRUS	HUMAN CORONA VIRUS (STRAIN 229E)	410-443	712-745	1262-1295	1963-1999	2078-2112	2474-2508
PRRP3_CVMH	RNA-DIRECTED RNA POLYMERASE	YIRUS	MURINE CORONA VIRUS MHV (STRAIN JHM)	708-740	3544-3577	3757-3785	3933-3961		
PRRP3_BEV	RNA-DIRECTED RNA POLYMERASE	YIRUS	BERNE VIRUS (BEV)	941-969	2137-2169	2178-2206			
PRRP3_CVMA3	RNA-DIRECTED RNA POLYMERASE	YIRUS	MURINE CORONA VIRUS MHV (STRAIN A59)	346-380	684-714	1689-1722	2698-2730		
PRRP3_CVMH	RNA-DIRECTED RNA POLYMERASE	YIRUS	MURINE CORONA VIRUS MHV (STRAIN JHM)	346-380	684-714	1687-1720	2156-2391	2696-2728	
PRRP3_CVPS	RNA-DIRECTED RNA POLYMERASE	YIRUS	PORCINE TRANSMISSIBLE GASTROENTERITIS CORONA VIRUS	173-207	322-350	482-515			
PRRP3_CVPR8	RNA-DIRECTED RNA POLYMERASE	YIRUS	PORCINE RESPIRATORY CORONA VIRUS	80-113					
PRRP3_JBYB	RNA-DIRECTED RNA POLYMERASE	YIRUS	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	636-670					
PRRP3_BUNYW	RNA POLYMERASE	YIRUS	BUNYAMWEA VIRUS	303-331	1096-1128				
PRRP3_HANTV	RNA POLYMERASE BETA SUBUNIT	YIRUS	HANTAN VIRUS (STRAIN 76-118) (KOREAN HEMORRHAGIC FEVER VIRUS)	1938-1971					
PRRP3_HSYA	RNA POLYMERASE BETA SUBUNIT	YIRUS	HUMAN RESPIRATORY SYNCYTIAL VIRUS (STRAIN A2)	892-922	1181-1213				
PRRP3_MABVM	RNA-DIRECTED RNA POLYMERASE	YIRUS	MARBURG VIRUS (STRAIN MUSOKE)	144-176	698-736	1042-1074	1797-1832		
PRRP3_MABVP	RNA-DIRECTED RNA POLYMERASE	YIRUS	MARBURG VIRUS (STRAIN POPP)	144-176	698-736	1042-1074	2223-2253		
PRRP3_MEASE	RNA POLYMERASE BETA SUBUNIT	YIRUS	MEASLES VIRUS (STRAIN EDMONSTON)	193-227	647-683	788-825	1160-1192	1886-1914	
PRRP3_MUMPM	RNA POLYMERASE BETA SUBUNIT	YIRUS	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	1882-1913					
PRRP3_NDVB	RNA POLYMERASE BETA SUBUNIT	YIRUS	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45) (NDV)	626-661	1571-1603				
PRRP3_P12HT	RNA POLYMERASE BETA SUBUNIT	YIRUS	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	268-305	558-595	654-688	1562-1599	1881-1912	2025-2053
PRRP3_P1314	RNA POLYMERASE BETA SUBUNIT	YIRUS	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN N111 47885)	41-76	735-764	784-814	2111-2139		
PRRP3_RAIUP	RNA POLYMERASE BETA SUBUNIT	YIRUS	RABIES VIRUS (STRAIN PV)	60-90	804-837	1365-1394	1930-1962		
PRRP3_RABVS	RNA POLYMERASE BETA SUBUNIT	YIRUS	RABIES VIRUS (STRAIN SAD B19)	60-90	804-837	1365-1394	1930-1962		
PRRP3_RDV	RNA-DIRECTED RNA POLYMERASE	YIRUS	RICE DWARF VIRUS (RDV)	1291-1323					
PRRP3_RFEV2	RNA-DIRECTED RNA POLYMERASE	YIRUS	RIFT VALLEY FEVER VIRUS (STRAIN ZH-548 M12) (RVFV)	1018-1055	2009-2044				
PRRP3_SENDS	RNA POLYMERASE BETA SUBUNIT	YIRUS	SENDAI VIRUS (STRAIN Z / HOST MUTANTS)	194-231	233-269	735-764	2140-2177		
PRRP3_SENDE	RNA POLYMERASE BETA SUBUNIT	YIRUS	SENDAI VIRUS (STRAIN ENDERS)	14-51	51-80	555-584	1922-1955	1960-1997	
PRRP3_SENDZ	RNA POLYMERASE BETA SUBUNIT	YIRUS	SENDAI VIRUS (STRAIN Z)	194-231	233-269	735-764	2140-2177		
PRRP3_SEOUR	RNA-DIRECTED RNA POLYMERASE	YIRUS	SEOUL VIRUS (STRAIN 80-39)	394-431	1938-1971	2081-2119			
PRRP3_SVSWR	RNA POLYMERASE BETA SUBUNIT	YIRUS	SIMIAN VIRUS 5 (STRAIN 21004-WR) (SV5)	557-594	1094-1122	2020-2051			
PRRP3_SYNV	RNA POLYMERASE BETA SUBUNIT	YIRUS	SONGHUS YELLOW FEVER VIRUS (SYNV)	128-164	605-634	820-856	918-951	1484-1517	
PRRP3_TSWVB	RNA-DIRECTED RNA POLYMERASE	YIRUS	TOMATO SPOTTED WILT VIRUS (BRAZILIAN ISOLATE: CPNH/BR-01) (TSWV)	43-79	841-880	2266-2298	2369-2403	2481-2511	2805-2840
PRRP3_UUK	RNA POLYMERASE	YIRUS	UUKUNIEMI VIRUS (UUK)	1017-1051	1147-1177	1293-1321	2060-2095		
PRRP3_VSVH	RNA POLYMERASE BETA SUBUNIT	YIRUS	VESICULAR STOMATITIS VIRUS	209-246	312-349	1011-1039	1662-1697	1956-1989	
PRRP3_VSVIO	RNA POLYMERASE BETA SUBUNIT	YIRUS	VESICULAR STOMATITIS VIRUS	1011-1039	1956-1989				
PRRP3_VSVJ	RNA POLYMERASE BETA SUBUNIT	YIRUS	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	138-171	209-246	312-349	961-999	1011-1039	1739-1772
PRRP3_BWYVF	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	BEET WESTERN YELLOW VIRUS (ISOLATE FL-1) (BWYV)	346-374					
PRRP3_BWYVI	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	BARLEY YELLOW DWARF VIRUS (ISOLATE: MAY-PS) (BYDV)	722-755					
PRRP3_BWYVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	BARLEY YELLOW DWARF VIRUS (ISOLATE: PAV) (BYDV)	722-755					
PRRP3_BYDVR	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	BARLEY YELLOW DWARF VIRUS (ISOLATE: P-PAV) (BYDV)	722-755					
PRRP3_CARMV	PROBABLE RNA-DIRECTED RNA POLYMERASE	YIRUS	CARNATION MOTTLE VIRUS (CARMV)	4-37					
PRRP3_CGMVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	CUCUMBER GREEN MOTTLE MOSAIC VIRUS (WATERMELON STRAIN SH)	443-481	725-755	1095-1132	1565-1597		
PRRP3_CNV	PROBABLE RNA-DIRECTED RNA POLYMERASE	YIRUS	CUCUMBER NECROSIS VIRUS (CNV)	470-501					
PRRP3_CRM	PROBABLE RNA-DIRECTED RNA POLYMERASE	YIRUS	CYMBIDIUM RINGSPOT VIRUS	28-62	267-300	470-501			
PRRP3_IDBVS	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	AVIAN INFECTIOUS BURSAL DISEASE VIRUS (STRAIN 5270) (IBDV)	186-218	274-302				
PRRP3_IDBVA	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	AVIAN INFECTIOUS BURSAL DISEASE VIRUS	260-288	511-543	599-627			
PRRP3_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE JASPER)	360-390	749-778				
PRRP3_IPNVJ	PUTATIVE RNA-DIRECTED RNA POLYMERASE	YIRUS	INFECTIOUS PANCREATIC NECROSIS VIRUS (SEROTYPE SP) (IPNV)	360-390	749-778				

PGCENE	PROTEIN	PROTEIN	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PRPRO_LYCVA	RNA POLYMERASE	LYMPHOCTIC CHORIOINFECTION VIRUS (STRAIN ARMSTRONG)	LYMPHOCTIC CHORIOINFECTION VIRUS (STRAIN WIE)	109-137	263-291	2077-2106				
PRPRO_LYCVA	RNA POLYMERASE	LYMPHOCTIC CHORIOINFECTION VIRUS (STRAIN WIE)	LYMPHOCTIC CHORIOINFECTION VIRUS (STRAIN WIE)	109-137						
PRPRO_MCNV	PROBABLE RNA-DIRECTED RNA POLYMERASE	MAIZE CHLOROTIC MOTTLE VIRUS (MCMV)	MAIZE CHLOROTIC MOTTLE VIRUS (MCMV)	16-48	53-81					
PRPRO_PLRV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	576-607						
PRPRO_PLRV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	576-607						
PRPRO_PPMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN) (PPMV)	PEPPER MILD MOTTLE VIRUS (STRAIN SPAIN) (PPMV)	375-407	702-730	859-891	1069-1106	1533-1565		
PRPRO_PPMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	RED CLOVER NECROTIC MOSAIC VIRUS (RCNMV)	RED CLOVER NECROTIC MOSAIC VIRUS (RCNMV)	278-314	320-353					
PRPRO_REOV	RNA-DIRECTED RNA POLYMERASE	REOVIRUS (TYPE 2 / STRAIN D/JONES)	REOVIRUS (TYPE 2 / STRAIN D/JONES)	284-315						
PRPRO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTA VIRUS (STRAIN RP)	BOVINE ROTA VIRUS (STRAIN RP)	25-60	200-231	247-276				
PRPRO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	BOVINE ROTA VIRUS (STRAIN UK)	BOVINE ROTA VIRUS (STRAIN UK)	200-231	247-276					
PRPRO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	PORCINE ROTA VIRUS (STRAIN GOTTFRIED)	PORCINE ROTA VIRUS (STRAIN GOTTFRIED)	200-231	247-276					
PRPRO_ROTBR	RNA-DIRECTED RNA POLYMERASE SUBUNIT VP1	SIMIAN 11 ROTA VIRUS (STRAIN SAI1)	SIMIAN 11 ROTA VIRUS (STRAIN SAI1)	25-60	200-231	247-276				
PRPRO_TACV	RNA POLYMERASE	TACARIBE VIRUS	TACARIBE VIRUS	17-52	109-138	2078-2112				
PRPRO_TBSV	PROBABLE RNA-DIRECTED RNA POLYMERASE	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY) (TBSV)	TOMATO BUSHY STUNT VIRUS (STRAIN CHERRY) (TBSV)	470-501						
PRPRO_TBSV	PROBABLE RNA-DIRECTED RNA POLYMERASE	TURNIP CRINKLE VIRUS (TCV)	TURNIP CRINKLE VIRUS (TCV)	280-318						
PRPRO_TMGV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	TOBACCO MILD GREEN MOSAIC VIRUS (TMV STRAIN U2)	67-97	128-159	209-244	376-406	450-483	855-887	1527-1559
PRPRO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (VULGARE) (TMV)	TOBACCO MOSAIC VIRUS (VULGARE) (TMV)	128-159	376-406	700-728	1533-1565			
PRPRO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN KOREAN) (TMV)	TOBACCO MOSAIC VIRUS (STRAIN KOREAN) (TMV)	128-159	376-406	700-728	1533-1565			
PRPRO_TMV	PUTATIVE RNA-DIRECTED RNA POLYMERASE	TOBACCO MOSAIC VIRUS (STRAIN TOMATO) (TMV)	TOBACCO MOSAIC VIRUS (STRAIN TOMATO) (TMV)	128-159	376-406	700-728	857-889	1533-1565		
PRPRO_TNVA	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	TOBACCO NECROSIS VIRUS (STRAIN A) (TNV)	231-263						
PRPRO_TNVD	RNA-DIRECTED RNA POLYMERASE	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	TOBACCO NECROSIS VIRUS (STRAIN D) (TNV)	5-40	234-270					
PRPRO_CDOV	RNA POLYMERASE ALPHA SUBUNIT	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEEPOORT) (CDV)	CANINE DISTEMPER VIRUS (STRAIN ONDERSTEEPOORT) (CDV)	295-332						
PRPRO_MEAS	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN EDMONSTON)	MEASLES VIRUS (STRAIN EDMONSTON)	295-332						
PRPRO_MEAS	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN IP-3-CA)	MEASLES VIRUS (STRAIN IP-3-CA)	295-332						
PRPRO_MEAS	RNA POLYMERASE ALPHA SUBUNIT	MEASLES VIRUS (STRAIN YAMAGATA-1)	MEASLES VIRUS (STRAIN YAMAGATA-1)	295-332						
PRPRO_MUMPI	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN SBL-1)	MUMPS VIRUS (STRAIN SBL-1)	211-248						
PRPRO_MUMPE	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN ENDERS)	MUMPS VIRUS (STRAIN ENDERS)	212-249						
PRPRO_MUMPM	RNA POLYMERASE ALPHA SUBUNIT	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	MUMPS VIRUS (STRAIN MIYAHARA VACCINE)	212-249						
PRPRO_NDVA	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/22) (NDV)	NEWCASTLE DISEASE VIRUS (STRAIN AUSTRALIA-VICTORIA/22) (NDV)	220-235						
PRPRO_NDVB	RNA POLYMERASE ALPHA SUBUNIT	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45) (NDV)	NEWCASTLE DISEASE VIRUS (STRAIN BEAUDETTE C45) (NDV)	220-235						
PRPRO_P12H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	HUMAN PARAINFLUENZA 2 VIRUS (PIV-2)	216-253						
PRPRO_P12H	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	HUMAN PARAINFLUENZA 2 VIRUS (STRAIN TOSHIBA) (PIV-2)	216-253						
PRPRO_P14HA	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	HUMAN PARAINFLUENZA 4A VIRUS (STRAIN TOSHIBA) (PIV-4A)	220-237	332-364					
PRPRO_P14HB	RNA POLYMERASE ALPHA SUBUNIT	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	HUMAN PARAINFLUENZA 4B VIRUS (STRAIN 68-333) (PIV-4B)	220-257	332-364					
PRPRO_P14YV	RNA POLYMERASE ALPHA SUBUNIT	PIRY VIRUS	PIRY VIRUS	134-168						
PRPRO_RABVA	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN A VOI)	RABIES VIRUS (STRAIN A VOI)	216-244						
PRPRO_RABVC	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN CVS-11)	RABIES VIRUS (STRAIN CVS-11)	216-244						
PRPRO_RABVE	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN EKA)	RABIES VIRUS (STRAIN EKA)	216-244						
PRPRO_RABVP	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN PV)	RABIES VIRUS (STRAIN PV)	89-122	216-244					
PRPRO_RABVS	RNA POLYMERASE ALPHA SUBUNIT	RABIES VIRUS (STRAIN SAD B19)	RABIES VIRUS (STRAIN SAD B19)	216-244						
PRPRO_SEND5	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN 2 / HOST MUTANTS)	SENDAL VIRUS (STRAIN 2 / HOST MUTANTS)	530-566						
PRPRO_SEND6	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN 6/94)	SENDAL VIRUS (STRAIN 6/94)	510-566						
PRPRO_SEND7	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN FUSIIMI)	SENDAL VIRUS (STRAIN FUSIIMI)	530-566						
PRPRO_SENDH	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN HARRIS)	SENDAL VIRUS (STRAIN HARRIS)	530-566						
PRPRO_SENDZ	RNA POLYMERASE ALPHA SUBUNIT	SENDAL VIRUS (STRAIN 2)	SENDAL VIRUS (STRAIN 2)	530-566						
PRPRO_SVS	RNA POLYMERASE ALPHA SUBUNIT	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	199-236						
PRPRO_VSVJM	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN MISSOURI)	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN MISSOURI)	198-230						
PRPRO_VSVJO	RNA POLYMERASE ALPHA SUBUNIT	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	197-230						
PSODC_VACT	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	VACCINIA VIRUS (STRAIN COPENHAGEN)	19-55						
PSODC_VACT	SUPEROXIDE DISMUTASE LIKE PROTEIN	VACCINIA VIRUS (STRAIN WB)	VACCINIA VIRUS (STRAIN WB)	19-55						
PSODC_VAVR	SUPEROXIDE DISMUTASE LIKE PROTEIN	VARIOLA VIRUS	VARIOLA VIRUS	19-55						
PSPHR_AMEPV	SPHEROIDIN	AMISACT MOOREI ENTOMOPHAGUS (AMEPV)	AMISACT MOOREI ENTOMOPHAGUS (AMEPV)	58-86	138-172	627-659	671-701			
PSPII_MYAL	SERPIN I	MYXOMA VIRUS (STRAIN LAUSANNE)	MYXOMA VIRUS (STRAIN LAUSANNE)	167-200						
PSPII_VACC	SERPINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN COPENHAGEN)	VACCINIA VIRUS (STRAIN COPENHAGEN)	112-140						
PSPII_VACC	SERPINE PROTEINASE INHIBITOR 3	VACCINIA VIRUS (STRAIN WB)	VACCINIA VIRUS (STRAIN WB)	112-140						
PSPII_VAVR	SERPINE PROTEINASE INHIBITOR 1	VARIOLA VIRUS	VARIOLA VIRUS	116-144						
PTAGH_FOWPV	TRANS-ACTIVATOR PROTEIN FPO	POWLOX VIRUS	POWLOX VIRUS	199-230						

PCGENE	PROTEIN	FUNCTION	ALL Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILENAME	PROTEIN		VIRUS	99-129	172-210	461-491				
PTALA_BFDV	LARGE T ANTIGEN		BUDGERIGAR FLEDGLING DISEASE VIRUS (BFDV)	106-138						
PTAMI_POVIA	MIDDLE T ANTIGEN		HANSTER POLYOMAVIRUS	43-80						
PTAMI_POVNI	MIDDLE T ANTIGEN		MOUSE POLYOMAVIRUS (STRAIN 3)	43-80						
PTAMI_POVNA	MIDDLE T ANTIGEN		MOUSE POLYOMAVIRUS (STRAIN A2)	43-80						
PTAMI_POVNC	MIDDLE T ANTIGEN		MOUSE POLYOMAVIRUS (STRAIN CRAWFORD SMALL-PLAQUE)	130-162						
PTASM_POVBA	SMALL T ANTIGEN		POLYOMAVIRUS BK (STRAIN AS)	106-138						
PTASM_POVIB	SMALL T ANTIGEN		POLYOMAVIRUS BK	130-162						
PTASM_POVIA	SMALL T ANTIGEN		HANSTER POLYOMAVIRUS	106-138						
PTASM_POVNA	SMALL T ANTIGEN		MOUSE POLYOMAVIRUS (STRAIN A2)	43-80						
PTASM_POVNI	SMALL T ANTIGEN		MOUSE POLYOMAVIRUS (STRAIN A2)	132-164						
PTASM_POVNC	SMALL T ANTIGEN		SINIAN VIRUS 40 (SV40)	143-173	1469-1503	1791-1819	3102-3137			
PTASM_POVBA	SMALL T ANTIGEN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	161-192	699-736	812-840	2199-2228			
PTASM_POVIB	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	222-259	566-601	615-643	1436-1469	2037-2072		
PTASM_POVNA	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	265-297	559-589	1072-1106	3363-3392			
PTASM_POVNC	SMALL T ANTIGEN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	467-503	714-751	823-861	926-960	1503-1536	2421-2457	
PTASM_POVBA	SMALL T ANTIGEN		HERPESVIRUS SAIMIRI (STRAIN 11)	369-400						
PTASM_POVIB	SMALL T ANTIGEN		HUMAN ADENOVIRUS TYPE 7	230-267						
PTASM_POVNA	SMALL T ANTIGEN		AVIAN MUSCULOPONEURITIC FIBROSARCOMA VIRUS AS42	119-153	1105-1142					
PTASM_POVNC	SMALL T ANTIGEN		AFRICAN SWINE FEVER VIRUS (ISOLATE MALAWI LIL 20/1) (ASFV)	189-226	1104-1141					
PTASM_POVBA	SMALL T ANTIGEN		AVIAN RETICULOENDOTHELIOSIS VIRUS	121-156						
PTASM_POVIB	SMALL T ANTIGEN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	171-203						
PTASM_POVNA	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	185-219	387-425	452-484				
PTASM_POVNC	SMALL T ANTIGEN		AUTOGRAPHIA CALIFORNICA NUCLEAR POLYDROSIS VIRUS (ACNPV)	25-59						
PTASM_POVBA	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	355-386						
PTASM_POVIB	SMALL T ANTIGEN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	404-436						
PTASM_POVNA	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	223-251	437-475					
PTASM_POVNC	SMALL T ANTIGEN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	299-330						
PTASM_POVBA	SMALL T ANTIGEN		HERPESVIRUS SAIMIRI (STRAIN 11)	186-216						
PTASM_POVIB	SMALL T ANTIGEN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	223-252	302-330					
PTASM_POVNA	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	65-96						
PTASM_POVNC	SMALL T ANTIGEN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	614-648						
PTASM_POVBA	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	227-255						
PTASM_POVIB	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	678-713						
PTASM_POVNA	SMALL T ANTIGEN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	168-204						
PTASM_POVNC	SMALL T ANTIGEN		PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	40-76						
PTASM_POVBA	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	22-52						
PTASM_POVIB	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	302-339						
PTASM_POVNA	SMALL T ANTIGEN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	294-328						
PTASM_POVNC	SMALL T ANTIGEN		PSEUDORABIES VIRUS (STRAIN NIA-3) (PRV)	242-271						
PTASM_POVBA	SMALL T ANTIGEN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	56-92	375-412					
PTASM_POVIB	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	52-87						
PTASM_POVNA	SMALL T ANTIGEN		INFECTIOUS LARYNGOTRACHEITIS VIRUS (STRAIN THORNE V882)	158-196						
PTASM_POVNC	SMALL T ANTIGEN		EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	343-379						
PTASM_POVBA	SMALL T ANTIGEN		HERPESVIRUS SAIMIRI (STRAIN 11)	290-323						
PTASM_POVIB	SMALL T ANTIGEN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	540-571						
PTASM_POVNA	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	287-316						
PTASM_POVNC	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	464-501						
PTASM_POVBA	SMALL T ANTIGEN		HERPESVIRUS SAIMIRI (STRAIN 11)	163-197						
PTASM_POVIB	SMALL T ANTIGEN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	367-405						
PTASM_POVNA	SMALL T ANTIGEN		HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	404-436	564-592					
PTASM_POVNC	SMALL T ANTIGEN		EQUINE HERPESVIRUS TYPE 1	81-115						
PTASM_POVBA	SMALL T ANTIGEN		HERPESVIRUS SAIMIRI (STRAIN 11)	276-307						
PTASM_POVIB	SMALL T ANTIGEN		VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	553-581						
PTASM_POVNA	SMALL T ANTIGEN		HERPESVIRUS SAIMIRI (STRAIN 11)	98-130						
PTASM_POVNC	SMALL T ANTIGEN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	138-169						

PCG:GENE	PLC12L2IP	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILE:NAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PUL36_HCMVA	HYPOTHETICAL PROTEIN UL36	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	186-223						
PUL37_EBV	PROTEIN BOLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	85-123						
PUL37_HSVB	GENE 23 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	778-812						
PUL37_HSVSA	GENE 63 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	566-602						
PUL37_VZVD	GENE 21 PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	598-629	776-806					
PUL38_HCMVA	HYPOTHETICAL PROTEIN UL38	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	157-188						
PUL41_VZVD	HOST SHUTOFF VIRION PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	274-307						
PUL41_HSVI	MEMBRANE PROTEIN UL43	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	41-70						
PUL45_HSVI	GENE 15 MEMBRANE PROTEIN	VARICELLA-ZOSTER VIRUS (STRAIN DUMAS) (VZV)	34-64	277-308					
PUL47_HCMVA	PROTEIN UL47	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	438-471	741-777					
PUL47_HSV4	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 4	580-615						
PUL47_HSVB	97 KD ALPHA TRANS-INDUCING PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	587-622						
PUL49_HSVI	TEGUMENT PROTEIN UL49	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	226-259						
PUL49_HSVBP	TEGUMENT PROTEIN UL49 HOMOLOG	BOVINE HERPESVIRUS TYPE 1 (STRAIN P8-2)	135-168						
PUL52_EBV	PROBABLE DNA REPLICATION PROTEIN BSLF1	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	582-617						
PUL52_HSVI	DNA REPLICATION PROTEIN UL52	HERPES SIMPLEX VIRUS (TYPE 1 / STRAIN 17)	599-629	771-805					
PUL52_HSVSA	DNA REPLICATION PROTEIN UL52	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	316-344	580-618	912-947				
PUL53_HCMVA	PROBABLE DNA REPLICATION GENE 56 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	229-267	374-411					
PUL53_HCMVA	PROTEIN UL53	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	213-248						
PUL53_HSV6U	UL53 PROTEIN HOMOLOG	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	105-139						
PUL60_HCMVA	HYPOTHETICAL PROTEIN UL60	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-148						
PUL70_HCMVA	PROBABLE DNA REPLICATION PROTEIN UL70	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	36-65	626-664					
PUL77_HCMVA	VIRION PROTEIN UL77	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	381-413	565-598					
PUL78_HCMVA	HYPOTHETICAL PROTEIN UL78	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	262-290	303-341					
PUL79_HSVSA	HYPOTHETICAL GENE 18 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	158-195						
PUL87_HSVSA	HYPOTHETICAL PROTEIN 5R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	130-159						
PUL87_HSVSA	HYPOTHETICAL GENE 24 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	322-355						
PUL88_HCMVA	HYPOTHETICAL PROTEIN UL88	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	309-337						
PUL88_HSV6U	HYPOTHETICAL PROTEIN 6R	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN UGANDA-1102)	150-187	238-272					
PUL91_HSVSA	HYPOTHETICAL GENE 30 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	23-53						
PUL92_EBV	HYPOTHETICAL PROTEIN BDLF4	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	106-144						
PUL92_HSVSA	HYPOTHETICAL GENE 31 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	123-157						
PUL91_HCMVA	PROTEIN UL91	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	387-420						
PUL95_EBV	HYPOTHETICAL PROTEIN BDLF3	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	111-145						
PUL95_HCMVA	HYPOTHETICAL PROTEIN UL118	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	102-130	152-181					
PUL101_HCMVA	HYPOTHETICAL PROTEIN UL121	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	120-165						
PUL101_HCMVA	HYPOTHETICAL PROTEIN UL128	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	64-96						
PUL109_HCMVA	HYPOTHETICAL PROTEIN UL129	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	66-99						
PUL109_HCMVA	HYPOTHETICAL PROTEIN UL130	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	81-114						
PUNG_VACCC	URACIL-DNA GLYCOSYLASE	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	159-189						
PUNG_VACCV	URACIL-DNA GLYCOSYLASE	VACCINIA VIRUS (STRAIN COPENHAGEN)	82-117						
PUNG_VARV	URACIL-DNA GLYCOSYLASE	VARIOLA VIRUS	82-117						
PUS02_HCMVA	HYPOTHETICAL PROTEIN HOLF2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	43-73						
PUS07_HCMVA	HYPOTHETICAL PROTEIN HOLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	153-190						
PUS09_HCMVA	HYPOTHETICAL PROTEIN HOLF3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	179-213						
PUS10_HCMVA	HYPOTHETICAL PROTEIN IXL1F2	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	137-170						
PUS12_HCMVA	HYPOTHETICAL PROTEIN IXL1F6	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	20-67	113-142					
PUS13_HCMVA	HYPOTHETICAL PROTEIN IXL1F5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	11-45						
PUS15_HCMVA	HYPOTHETICAL PROTEIN HVL3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	343-375						
PUS18_HCMVA	HYPOTHETICAL PROTEIN IWL1F3	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	151-188	243-274					
PUS22_HCMVA	EARLY NUCLEAR PROTEIN IWL1F1	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	185-222						
PUS26_HCMVA	HYPOTHETICAL PROTEIN IHL1F5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	270-299						
PUS27_HCMVA	G-PROTEIN COUPLED RECEPTOR HOMOLOG US27	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	132-164						
PUS29_HCMVA	HYPOTHETICAL PROTEIN IHL1F4	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	247-285						
PUS30_HCMVA	HYPOTHETICAL PROTEIN IHL1F5	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	246-276						

PCGENE	P2ICTLZIP	All Viruses (no bacteriophages)	AREA.1	AREA.2	AREA.3	AREA.4	AREA.5	AREA.6	AREA.7
FILE NAME	PROTEIN	VIRUS	263-292						
PV131 ANVLE	125 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 423 / ISOLATE LEIDEN)							
PV13K TRVPL	16 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN PLB)	24-62						
PV141 BNVAC	HELICASE	AUTOCORPHIA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS	312-342						
PV17K BSNV	17 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	40-75						
PV1A CNVFN	1A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CNV)	674-709						
PV270 ASF87	L270 PROTEIN	AFRICAN SWINE FEVER VIRUS (STRAIN BA71V) (ASFV)	103-135						
PV2A BSMV	2A PROTEIN	BROAD BEAN MOTTLE VIRUS	636-673						
PV2A CCMV	2A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	325-363	639-673	762-799				
PV2A CNVFN	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN FNY) (CNV)	208-243	292-320					
PV2A CNVQ	2A PROTEIN	CUCUMBER MOSAIC VIRUS (STRAIN Q) (CNV)	205-240						
PV2A TAV	2A PROTEIN	TOMATO ASPERM VIRUS (TAV)	297-325						
PV30K TRVTC	29.1 KD PROTEIN	TOBACCO RATTLE VIRUS (STRAIN TCM)	102-131						
PV3A BSMV	3A PROTEIN	BROAD BEAN MOTTLE VIRUS	155-187						
PV3A BNV	3A PROTEIN	BROME MOSAIC VIRUS (BMV)	159-189						
PV3A CCMV	3A PROTEIN	COWPEA CHLOROTIC MOTTLE VIRUS (CCMV)	160-188						
PV3A IBV8	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	5-43						
PV3A IBVM	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN M41) (IBV)	5-42						
PV3A IBVP3	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS	5-42						
PV3A IBVUS	3A PROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN UK/183/66) (IBV)	5-42						
PV31K ACLSV	50.8 KD PROTEIN	APPLE CHLOROTIC LEAF SPOT VIRUS (ACLSV)	70-106						
PV31K BWYVF	51 KD PROTEIN	BEEET WESTERN YELLOW VIRUS (ISOLATE FL-1) (BWYV)	366-398						
PV31K BWYVG	51 KD PROTEIN	BEEET WESTERN YELLOW VIRUS (ISOLATE GB1) (BWYV)	366-398						
PV36K PLRV	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	360-392						
PV36K PLRVW	56 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	360-392						
PV38K BSMV	58 KD PROTEIN	BARLEY STRIPE MOSAIC VIRUS (BSMV)	320-353						
PV70K PLRV	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN 1) (PLRV)	220-257						
PV70K PLRVW	69.7 KD PROTEIN	POTATO LEAFROLL VIRUS (STRAIN WAGENINGEN) (PLRV)	220-257						
PV90K AMVLE	90 KD PROTEIN	ALFALFA MOSAIC VIRUS (STRAIN 423 / ISOLATE LEIDEN)	103-131						
PV404 VACC	PROTEIN A4	VACCINIA VIRUS (STRAIN COPENHAGEN)	217-251						
PV404 VACCV	PROTEIN A4	VACCINIA VIRUS (STRAIN WR)	217-251						
PV404 VARV	PROTEIN A4	VARIOLA VIRUS	207-241						
PV411 VACC	PROTEIN A11	VACCINIA VIRUS (STRAIN COPENHAGEN)	95-132						
PV411 VARV	PROTEIN A11	VARIOLA VIRUS	96-133						
PV418 VACC	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	390-421						
PV418 VACCV	56 KD ABORTIVE LATE PROTEIN	VACCINIA VIRUS (STRAIN WR)	390-421						
PV418 VARV	56 KD ABORTIVE LATE PROTEIN	VARIOLA VIRUS	390-421						
PV423 VACC	PROTEIN A23	VACCINIA VIRUS (STRAIN COPENHAGEN)	81-111	170-203					
PV423 VARV	PROTEIN A23	VARIOLA VIRUS	81-111	170-203					
PV431 VACC	PROTEIN A31	VACCINIA VIRUS (STRAIN COPENHAGEN)	42-76						
PV431 VACCV	PROTEIN A31	VACCINIA VIRUS (STRAIN WR)	42-76						
PV431 VARV	PROTEIN A31	VARIOLA VIRUS	42-76						
PV432 VACC	PROTEIN A32	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGEN)	48-79						
PV432 VARV	PROTEIN A32	VARIOLA VIRUS	18-49						
PV440 VACC	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-37						
PV440 VACCV	PROTEIN A40	VACCINIA VIRUS (STRAIN COPENHAGEN)	4-37						
PV440 VARV	PROTEIN A40	VACCINIA VIRUS (STRAIN WR)	94-129						
PV443 VACC	PROTEIN A43	VACCINIA VIRUS (STRAIN COPENHAGEN)	94-129						
PV443 VACCV	PROTEIN A43	VACCINIA VIRUS (STRAIN WR)	95-130						
PV443 VARV	PROTEIN A43	VARIOLA VIRUS	109-143						
PV451 VACC	PROTEIN A51	VACCINIA VIRUS (STRAIN COPENHAGEN)	109-143						
PV451 VACCV	PROTEIN A51	VACCINIA VIRUS (STRAIN WR)	109-143						
PV451 VARV	PROTEIN A51	VARIOLA VIRUS	89-118						
PV461 BSMV	ALI PROTEIN	BEEET CURL Y TOP MOSAIC (BCTV)	89-118						
PV461 CLVK	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN WEST KENYAN 844)	88-117						
PV461 CCMV	ALI PROTEIN	CASSAVA LATENT VIRUS (STRAIN NIGERIAN)	88-117						
PV461 PMVW	ALI PROTEIN	POTATO YELLOW MOSAIC VIRUS (ISOLATE VENEZUELA)	89-118						
PV461 TCMV	ALI PROTEIN	TOMATO GOLDEN MOSAIC VIRUS (ISOLATE TCMV)	90-119						
PV461 TYLCM	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (STRAIN MARMANDE) (TYLCV)	89-118						
PV461 TYLCV	ALI PROTEIN	TOMATO YELLOW LEAF CURL VIRUS (TYLCV)	87-116						

PCGENE	FUNCTION	ALL Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILENAME	PROTEIN	VIRUS	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
PVF01_VACCC	PROTEIN F3	VACCINIA VIRUS (STRAIN COPENHAGEN)	2-40	61-93					
PVF03_VACCV	PROTEIN F3	VACCINIA VIRUS (STRAIN WR)	2-40	61-93					
PVF04_FOWPV	PROTEIN FPI	FOWLPOX VIRUS	297-330						
PVF04_FOWPV	PROTEIN FP4	FOWLPOX VIRUS	237-267						
PVF07_CAPVK	PROTEIN F7	CAPRIPOX VIRUS (STRAIN KS-1)	85-118						
PVF07_VACCC	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	28-61						
PVF08_VACCV	14 KD FUSION PROTEIN	VACCINIA VIRUS (STRAIN WR)	28-61						
PVF08_VACCV	14 KD FUSION PROTEIN	VARIOLA VIRUS	28-61						
PVG01_HSVII	HYPOTHETICAL GENE 1 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	317-346						
PVG02_HSVIB	HYPOTHETICAL GENE 2 PROTEIN	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	163-196						
PVG02_VACCV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTEIN	VACCINIA VIRUS (STRAIN WR), AND VACCINIA VIRUS (STRAIN COPENHAGEN)	92-120						
PVG02_VACCV	ISATIN-BETA-THIOSEMICARBAZONE DEPENDENT PROTEIN	VARIOLA VIRUS	92-120						
PVG03_HSVII	HYPOTHETICAL GENE 3 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	108-136						
PVG06_HSVII	HYPOTHETICAL GENE 6 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	54-83						
PVG06_VACCC	PROTEIN G6	VACCINIA VIRUS (STRAIN COPENHAGEN)	99-136						
PVG06_VACCV	PROTEIN G6	VARIOLA VIRUS	99-136						
PVG07_VACCC	PROTEIN G7	VACCINIA VIRUS (STRAIN COPENHAGEN)	113-145						
PVG07_VACCV	PROTEIN G7	VARIOLA VIRUS	113-145						
PVG09_VACCC	PROTEIN F1	VACCINIA VIRUS (STRAIN COPENHAGEN)	303-338						
PVG09_VACCV	PROTEIN F1	VACCINIA VIRUS (STRAIN WR)	266-301						
PVG09_VACCV	PROTEIN F1	VARIOLA VIRUS	303-338						
PVG11_HSVII	HYPOTHETICAL GENE 11 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	150-183						
PVG17_HSVII	HYPOTHETICAL GENE 12 ZINC-BINDING PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	206-243						
PVG12_HSVSA	HYPOTHETICAL GENE 12 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	68-106						
PVG1_SPVIR	CAPSID PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	254-292	303-337	414-452				
PVG21_HSVII	HYPOTHETICAL GENE 22 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	300-337	647-678					
PVG23_HSVII	HYPOTHETICAL GENE 23 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	70-108						
PVG26_HSVII	HYPOTHETICAL GENE 26 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	94-125						
PVG27_HSVSA	HYPOTHETICAL GENE 27 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	36-74						
PVG28_HSVII	HYPOTHETICAL GENE 28 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	491-521						
PVG28_AMERV	HYPOTHETICAL G28 PROTEIN	AMSACTA MOOREI ENTOMOPHILUS (AMEPV)	180-217						
PVG2_SPV4	GENE 2 PROTEIN	SPIROPLASMA VIRUS 4 (SPV4)	209-244						
PVG35_HSVII	HYPOTHETICAL GENE 35 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	15-46	190-226					
PVG36_HSVSA	POSSIBLE TYROSINE-PROTEIN KINASE	HERPESVIRUS SAIMIRI (STRAIN 11)	151-185						
PVG39_HSVII	HYPOTHETICAL GENE 39 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	543-577	648-682					
PVG40_HSVSA	HYPOTHETICAL GENE 40 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	187-216						
PVG41_HSVII	HYPOTHETICAL GENE 41 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	11-45	202-233					
PVG42_HSVII	HYPOTHETICAL GENE 42 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	91-125						
PVG43_HSVII	HYPOTHETICAL GENE 43 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	109-140	157-185					
PVG46_HSVII	PROBABLE MAJOR GLYCOPROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	888-925						
PVG48_HSVSA	HYPOTHETICAL GENE 48 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	329-357						
PVG50_HSVSA	PROBABLE TRANSCRIPTION ACTIVATOR-EDRF1	HERPESVIRUS SAIMIRI (STRAIN 11)	113-141						
PVG51_HSVII	HYPOTHETICAL GENE 51 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	29-64	84-120					
PVG52_HSVII	HYPOTHETICAL GENE 52 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	96-134						
PVG55_HSVII	HYPOTHETICAL GENE 55 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	100-129						
PVG56_HSVII	HYPOTHETICAL GENE 56 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	364-396	631-667	1091-1126				
PVG58_HSVII	HYPOTHETICAL GENE 58 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	342-375	480-508					
PVG58_HSVSA	GENE 58 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	25-60	195-233					
PVG59_HSVII	HYPOTHETICAL GENE 59 MEMBRANE PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	82-118						
PVG61_HSVII	HYPOTHETICAL GENE 61 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	76-109						
PVG64_HSVII	HYPOTHETICAL GENE 64 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	55-89	363-401	420-452				
PVG65_HSVII	HYPOTHETICAL GENE 65 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	801-836	1146-1174	1290-1326				
PVG67_HSVII	HYPOTHETICAL GENE 67 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	1150-1185						
PVG6_SPVIR	GENE 6 PROTEIN	SPIROPLASMA VIRUS SPV1-R8A2 B	60-89						
PVG71_HSVSA	HYPOTHETICAL GENE 71 PROTEIN	HERPESVIRUS SAIMIRI (STRAIN 11)	128-158						
PVG72_HSVII	HYPOTHETICAL GENE 72 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	445-478	720-751	1158-1189	1252-1285			
PVG75_HSVII	HYPOTHETICAL GENE 75 PROTEIN	ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	263-291	387-422					

PGCENE	P23CT1ZIP	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILENAME	PROTEIN	VIRUS							
PVGLF_MEAS1	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN IP-3-CA)	227-259	434-487					
PVGLF_MEAS2	FUSION GLYCOPROTEIN PRECURSOR	MEASLES VIRUS (STRAIN YAMAGATA-1)	224-256	451-484					
PVGLF_MUMPI1	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL-1)	5-38	446-474					
PVGLF_MUMPI2	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN RW)	446-474						
PVGLF_MUMPI3	FUSION GLYCOPROTEIN PRECURSOR	MUMPS VIRUS (STRAIN SBL)	5-38	446-474					
PVGLF_NDVI	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN ITALIEN45) (NDV)	132-165						
PVGLF_NDVL	FUSION GLYCOPROTEIN PRECURSOR	NEWCASTLE DISEASE VIRUS (STRAIN LAS46) (NDV)	132-165						
PVGLF_PHODV	FUSION GLYCOPROTEIN PRECURSOR	PHOCINE DISTEMPOR VIRUS	531-565						
PVGLF_PTHIC	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 1 VIRUS (STRAIN C39)	456-484						
PVGLF_PJB8	FUSION GLYCOPROTEIN PRECURSOR	BOVINE PARAINFLUENZA 3 VIRUS	451-481						
PVGLF_PJH4	FUSION GLYCOPROTEIN PRECURSOR	HUMAN PARAINFLUENZA 3 VIRUS (STRAIN NIH 47885)	451-481						
PVGLF_RNDK	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN KABETE O) (RDV)	220-252	447-480					
PVGLF_RNDL	FUSION GLYCOPROTEIN PRECURSOR	RINDERPEST VIRUS (STRAIN L) (RDV)	220-252	447-480					
PVGLF_SEND5	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN Z / HOST MUTANTS)	460-488						
PVGLF_SEND6	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN FUSHIMI)	460-488						
PVGLF_SEND7	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN HARRIS)	460-488						
PVGLF_SEND8	FUSION GLYCOPROTEIN PRECURSOR	SENDAL VIRUS (STRAIN Z)	460-488						
PVGLF_SVS	FUSION GLYCOPROTEIN PRECURSOR	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	446-474						
PVGLF_TRTV	FUSION GLYCOPROTEIN PRECURSOR	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	452-481						
PVGLG_HSVB	GLYCOPROTEIN G PRECURSOR	EQUINE HERPESVIRUS TYPE 1 (STRAIN AB4P) (EHV-1)	327-364						
PVGLG_SYNV	SPIKE GLYCOPROTEIN PRECURSOR	SONGHU YELLOW NET VIRUS (SYNV)	524-553						
PVGLG_VSVIG	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE INDIANA / STRAIN GLASGOW)	450-488						
PVGLG_VSVIO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (SEROTYPE NEW JERSEY / STRAIN OGDEN)	457-492						
PVGLG_VSVJO	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN ORSAV)	450-488						
PVGLG_VSVJ1	SPIKE GLYCOPROTEIN PRECURSOR	VESICULAR STOMATITIS VIRUS (STRAIN SAN JUAN)	450-488						
PVGLH_HCMVA	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	691-719						
PVGLH_HCMVT	GLYCOPROTEIN H PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN TOWNE)	690-718						
PVGLI_HSVUG	GLYCOPROTEIN I PRECURSOR	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	215-247	640-677					
PVGLH_HSVH4	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 4	814-830						
PVGLH_HSVH5	GLYCOPROTEIN H PRECURSOR	EQUINE HERPESVIRUS TYPE 5	807-843						
PVGLI_HCMVA	IMMEDIATE EARLY GLYCOPROTEIN PRECURSOR	HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	158-194						
PVGLM_DUNGE	M POLYPROTEIN PRECURSOR	BUNYAVIRUS GERMISTON	197-227	418-468	982-1020	1049-1084			
PVGLM_HUNI7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS LA TROSSE (ISOLATE: L74)	190-220	344-381					
PVGLM_HUNI1	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB1)	190-220	434-472	823-854				
PVGLM_HUNI2	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB2)	244-273	637-672	886-915	915-965	1403-1441		
PVGLM_HUNI3	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB3)	610-641	1081-1119					
PVGLM_HUNI4	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB4)	188-222	612-643	1082-1120				
PVGLM_HUNI5	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB5)	188-222	612-643	1083-1121				
PVGLM_HUNI6	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB6)	269-307	1028-1062					
PVGLM_HUNI7	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB7)	610-641	1081-1119					
PVGLM_HUNI8	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB8)	188-222	612-643	1082-1120				
PVGLM_HUNI9	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB9)	188-222	612-643	1083-1121				
PVGLM_HUNI10	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB10)	269-307	1028-1062					
PVGLM_HUNI11	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB11)	610-641	1081-1119					
PVGLM_HUNI12	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB12)	188-222	612-643	1082-1120				
PVGLM_HUNI13	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB13)	188-222	612-643	1083-1121				
PVGLM_HUNI14	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB14)	269-307	1028-1062					
PVGLM_HUNI15	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB15)	610-641	1081-1119					
PVGLM_HUNI16	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB16)	188-222	612-643	1082-1120				
PVGLM_HUNI17	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB17)	188-222	612-643	1083-1121				
PVGLM_HUNI18	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB18)	269-307	1028-1062					
PVGLM_HUNI19	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB19)	610-641	1081-1119					
PVGLM_HUNI20	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB20)	188-222	612-643	1082-1120				
PVGLM_HUNI21	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB21)	188-222	612-643	1083-1121				
PVGLM_HUNI22	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB22)	269-307	1028-1062					
PVGLM_HUNI23	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB23)	610-641	1081-1119					
PVGLM_HUNI24	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB24)	188-222	612-643	1082-1120				
PVGLM_HUNI25	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB25)	188-222	612-643	1083-1121				
PVGLM_HUNI26	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB26)	269-307	1028-1062					
PVGLM_HUNI27	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB27)	610-641	1081-1119					
PVGLM_HUNI28	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB28)	188-222	612-643	1082-1120				
PVGLM_HUNI29	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB29)	188-222	612-643	1083-1121				
PVGLM_HUNI30	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB30)	269-307	1028-1062					
PVGLM_HUNI31	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB31)	610-641	1081-1119					
PVGLM_HUNI32	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB32)	188-222	612-643	1082-1120				
PVGLM_HUNI33	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB33)	188-222	612-643	1083-1121				
PVGLM_HUNI34	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB34)	269-307	1028-1062					
PVGLM_HUNI35	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB35)	610-641	1081-1119					
PVGLM_HUNI36	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB36)	188-222	612-643	1082-1120				
PVGLM_HUNI37	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB37)	188-222	612-643	1083-1121				
PVGLM_HUNI38	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB38)	269-307	1028-1062					
PVGLM_HUNI39	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB39)	610-641	1081-1119					
PVGLM_HUNI40	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB40)	188-222	612-643	1082-1120				
PVGLM_HUNI41	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB41)	188-222	612-643	1083-1121				
PVGLM_HUNI42	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB42)	269-307	1028-1062					
PVGLM_HUNI43	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB43)	610-641	1081-1119					
PVGLM_HUNI44	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB44)	188-222	612-643	1082-1120				
PVGLM_HUNI45	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB45)	188-222	612-643	1083-1121				
PVGLM_HUNI46	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB46)	269-307	1028-1062					
PVGLM_HUNI47	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB47)	610-641	1081-1119					
PVGLM_HUNI48	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB48)	188-222	612-643	1082-1120				
PVGLM_HUNI49	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB49)	188-222	612-643	1083-1121				
PVGLM_HUNI50	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB50)	269-307	1028-1062					
PVGLM_HUNI51	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB51)	610-641	1081-1119					
PVGLM_HUNI52	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB52)	188-222	612-643	1082-1120				
PVGLM_HUNI53	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB53)	188-222	612-643	1083-1121				
PVGLM_HUNI54	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB54)	269-307	1028-1062					
PVGLM_HUNI55	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB55)	610-641	1081-1119					
PVGLM_HUNI56	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB56)	188-222	612-643	1082-1120				
PVGLM_HUNI57	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB57)	188-222	612-643	1083-1121				
PVGLM_HUNI58	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB58)	269-307	1028-1062					
PVGLM_HUNI59	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB59)	610-641	1081-1119					
PVGLM_HUNI60	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB60)	188-222	612-643	1082-1120				
PVGLM_HUNI61	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB61)	188-222	612-643	1083-1121				
PVGLM_HUNI62	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB62)	269-307	1028-1062					
PVGLM_HUNI63	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB63)	610-641	1081-1119					
PVGLM_HUNI64	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB64)	188-222	612-643	1082-1120				
PVGLM_HUNI65	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB65)	188-222	612-643	1083-1121				
PVGLM_HUNI66	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB66)	269-307	1028-1062					
PVGLM_HUNI67	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB67)	610-641	1081-1119					
PVGLM_HUNI68	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB68)	188-222	612-643	1082-1120				
PVGLM_HUNI69	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB69)	188-222	612-643	1083-1121				
PVGLM_HUNI70	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB70)	269-307	1028-1062					
PVGLM_HUNI71	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB71)	610-641	1081-1119					
PVGLM_HUNI72	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB72)	188-222	612-643	1082-1120				
PVGLM_HUNI73	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB73)	188-222	612-643	1083-1121				
PVGLM_HUNI74	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB74)	269-307	1028-1062					
PVGLM_HUNI75	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB75)	610-641	1081-1119					
PVGLM_HUNI76	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB76)	188-222	612-643	1082-1120				
PVGLM_HUNI77	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB77)	188-222	612-643	1083-1121				
PVGLM_HUNI78	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB78)	269-307	1028-1062					
PVGLM_HUNI79	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB79)	610-641	1081-1119					
PVGLM_HUNI80	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB80)	188-222	612-643	1082-1120				
PVGLM_HUNI81	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB81)	188-222	612-643	1083-1121				
PVGLM_HUNI82	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB82)	269-307	1028-1062					
PVGLM_HUNI83	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB83)	610-641	1081-1119					
PVGLM_HUNI84	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB84)	188-222	612-643	1082-1120				
PVGLM_HUNI85	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB85)	188-222	612-643	1083-1121				
PVGLM_HUNI86	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB86)	269-307	1028-1062					
PVGLM_HUNI87	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB87)	610-641	1081-1119					
PVGLM_HUNI88	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB88)	188-222	612-643	1082-1120				
PVGLM_HUNI89	M POLYPROTEIN PRECURSOR	BUNYAVIRUS SNOWSHOE (ISOLATE: IAB89)	188-222	612-6					

PGENE	P21CTLZIP	All Viruses (no bacteriophages)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
FILE NAME	PROTEIN	VIRUS	29-59	285-313					
PV12_HPV39	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 39							
PV12_HPV42	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 42	344-379						
PV12_HPV47	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 47	26-57						
PV12_HPV51	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 51	29-59						
PV12_HPV58	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE 58	27-57						
PV12_HPV5E	PROBABLE L2 PROTEIN	HUMAN PAPILLOMAVIRUS TYPE ME180	29-59						
PV12_PCPV1	PROBABLE L2 PROTEIN	PGMY CHIMPANZEE PAPILLOMAVIRUS TYPE 1	29-59						
PV12_IRV1	L96 PROTEIN	TIPULA IRIDESCENT VIRUS (TIV) (INSECT IRIDESCENT VIRUS TYPE 1)	144-177	686-718					
PV121_REOVD	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 3 / STRAIN DEARING)	280-318	324-361					
PV121_REOVL	MINOR VIRION STRUCTURAL PROTEIN MU-2	REOVIRUS (TYPE 1 / STRAIN LANG)	280-318						
PV121_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/IMU-1C	REOVIRUS (TYPE 3 / STRAIN DEARING)	168-199						
PV121_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/IMU-1C	REOVIRUS (TYPE 1 / STRAIN DEARING)	168-199						
PV121_REOVD	MAJOR VIRION STRUCTURAL PROTEIN MU-1/IMU-1C	REOVIRUS (TYPE 2 / STRAIN D5/ONES)	168-199						
PV121_REOVL	MAJOR VIRION STRUCTURAL PROTEIN MU-1/IMU-1C	REOVIRUS (TYPE 1 / STRAIN LANG)	168-199						
PV121_REOVD	MAJOR NONSTRUCTURAL PROTEIN MU-NS	REOVIRUS (TYPE 3 / STRAIN DEARING)	333-364						
PV121_REOVL	MATRIX PROTEIN	SIMIAN VIRUS 5 (STRAIN W3) (SV5)	308-342						
PV121_TRIV	MATRIX PROTEIN	TURKEY RHINOTRACHEITIS VIRUS (TRTV)	122-150						
PV121_CVBNT	E1 GLYCOPROTEIN	BOVINE CORONAVIRUS (STRAIN NEBUS)	64-102						
PV121_CVHOC	E1 GLYCOPROTEIN	HUMAN CORONAVIRUS (STRAIN OC43)	64-102						
PV121_CVMAS	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN A59)	65-103						
PV121_CVMJH	E1 GLYCOPROTEIN	MURINE CORONAVIRUS MHV (STRAIN HM)	65-103						
PV121_CVTKE	E1 GLYCOPROTEIN	TURKEY ENTERIC CORONAVIRUS (TCV)	64-102						
PV121_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE) (IBV)	72-101						
PV121_IBVB2	E1 GLYCOPROTEIN	AVIAN INFECTIOUS BRONCHITIS VIRUS (STRAIN BEAUDETTE N42) (IBV)	72-101						
PV121_EBV	PROBABLE MEMBRANE PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	178-213						
PV121_CERV	MOVEMENT PROTEIN	CARNATION ETCHED RING VIRUS (CERV)	93-126						
PV121_SOCNV	MOVEMENT PROTEIN	SOYBEAN CHLOROTIC MOTTLE VIRUS	66-98	271-303					
PV121_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (BROWN SHANGHAI DUCK ISOLATE S5) (DHBV)	201-238	269-302					
PV121_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (STRAIN CHINA) (DHBV)	194-227	268-301					
PV121_HPBDB	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (DHBV)	157-190	231-264					
PV121_HPBDC	MAJOR SURFACE ANTIGEN PRECURSOR	DUCK HEPATITIS B VIRUS (WHITE SHANGHAI DUCK ISOLATE S31) (DHBV)	194-228	269-302					
PV121_HPBGS	MAJOR SURFACE ANTIGEN PRECURSOR	GROUND SQUIRREL HEPATITIS VIRUS (GSIV)	209-243	271-307					
PV121_HPBHE	MAJOR SURFACE ANTIGEN PRECURSOR	HERON HEPATITIS B VIRUS	159-195	216-269					
PV121_HPBVO	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS	70-98						
PV121_HPBV2	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW2)	244-272						
PV121_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR4)	244-272						
PV121_HPBV9	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN 991)	244-272						
PV121_HPBVA	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN ALPHA1)	231-261						
PV121_HPBVD	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AD)	70-98						
PV121_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN INDONESIA/PIDW420)	233-261						
PV121_HPBVI	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN JAPAN/PIDW233)	233-261						
PV121_HPBVL	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (STRAIN LSH / CHIMPANZEE ISOLATE)	233-261						
PV121_HPBVN	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE ADR / STRAIN NC-1)	70-98						
PV121_HPBVO	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN OKINAWA/PODW282)	233-261						
PV121_HPBVP	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW / STRAIN PHILIPPINO/PFDW294)	244-272						
PV121_HPBVR	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADR)	244-272						
PV121_HPBVS	MAJOR SURFACE ANTIGEN	HEPATITIS B VIRUS (SUBTYPE AR)	70-98						
PV121_HPBVW	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADW)	233-261						
PV121_HPBVY	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE AYW)	233-261						
PV121_HPBVZ	MAJOR SURFACE ANTIGEN PRECURSOR	HEPATITIS B VIRUS (SUBTYPE ADYW)	233-261						
PV121_WHV1	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 1	207-241	269-303					
PV121_WHV39	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 59	212-246	274-310					
PV121_WHV7	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 7	212-246	274-310					
PV121_WHV8	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8	212-246	274-310					
PV121_WHV81	PROBABLE MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS 8 (INFECTIOUS CLONE)	212-246	274-303					
PV121_WHVW6	MAJOR SURFACE ANTIGEN PRECURSOR	WOODCHUCK HEPATITIS VIRUS W64 (ISOLATE PW523)	125-161						
PV121_IATZ1	MATRIX (M2) PROTEIN	INFLUENZA A VIRUS (STRAIN A/SWINE/JOHAI/5/00)	10-42						

PCGENE	P3CTLZIP	FILE NAME	PROTEIN	All Viruses (no bacteriophage)	AREA 1	AREA 2	AREA 3	AREA 4	AREA 5	AREA 6	AREA 7
VS06	ROTIF	VP6 PROTEIN		VIRUS	55-92						
VS06	ROTH	VP6 PROTEIN		EQUINE ROTAVIRUS (STRAIN F1-14)	55-92						
VS06	ROTH	VP6 PROTEIN		EQUINE ROTAVIRUS (STRAIN H-2)	55-92						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN 1076)	55-92	312-340					
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (GROUP C / STRAIN BRISTOL)	55-92						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (SEROTYPE 2 / STRAIN S2)	55-92						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	55-92	313-349					
VS06	ROTH	VP6 PROTEIN		PORCINE ROTAVIRUS (GROUP C / STRAIN COWDEN)	55-92						
VS06	ROTH	VP6 PROTEIN		PORCINE ROTAVIRUS (STRAIN GOTTFRIED)	55-92	313-349					
VS06	ROTH	VP6 PROTEIN		SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-92	313-349					
VS06	ROTH	VP6 PROTEIN		SIMIAN 11 ROTAVIRUS (STRAIN SA11)	55-92	313-349					
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (SEROTYPE 4 / STRAIN ST. THOMAS 3)	131-159						
VS06	ROTH	VP6 PROTEIN		PORCINE ROTAVIRUS (SEROTYPE 4 / STRAIN BEN-144)	131-159						
VS06	ROTH	VP6 PROTEIN		BOVINE ROTAVIRUS (STRAIN NGD)	52-89						
VS06	ROTH	VP6 PROTEIN		BOVINE ROTAVIRUS (STRAIN UK)	52-89						
VS06	ROTH	VP6 PROTEIN		BOVINE ROTAVIRUS (STRAIN A28)	52-89						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (STRAIN A64 / CLONE 2)	52-89						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (STRAIN A64 / CLONE 6)	52-89						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	52-89						
VS06	ROTH	VP6 PROTEIN		SIMIAN 11 ROTAVIRUS (STRAIN SA11)	52-89						
VS06	ROTH	VP6 PROTEIN		HUMAN ROTAVIRUS (SEROTYPE 1 / STRAIN WA)	99-130						
VS06	ROTH	VP6 PROTEIN		REOVIRUS (TYPE 2 / STRAIN D5/ONES)	346-384						
VS06	ROTH	VP6 PROTEIN		REOVIRUS (TYPE 1 / STRAIN LANG)	110-147						
VS06	ROTH	VP6 PROTEIN		SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	147-182						
VS06	ROTH	VP6 PROTEIN		MYXOMA VIRUS (STRAIN LAUSANNE)	261-290						
VS06	ROTH	VP6 PROTEIN		SHOPE FIBROMA VIRUS (STRAIN KASZA) (SFV)	211-249						
VS06	ROTH	VP6 PROTEIN		CAPPOXVIRUS (STRAIN INS-1)	116-150						
VS06	ROTH	VP6 PROTEIN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	166-199	305-341					
VS06	ROTH	VP6 PROTEIN		HUMAN CYTOMEGALOVIRUS (STRAIN AD169)	176-209						
VS06	ROTH	VP6 PROTEIN		ICTALURID HERPESVIRUS 1 (CHANNEL CATFISH VIRUS) (CCV)	756-788						
VS06	ROTH	VP6 PROTEIN		SENDAL VIRUS (STRAIN 694)	57-93						
VS06	ROTH	VP6 PROTEIN		HUMAN ADENOVIRUS TYPE 7	55-83						
VS06	ROTH	VP6 PROTEIN		MAIZE STREAK VIRUS (SOUTH-AFRICAN ISOLATE) (MSV)	24-54						
VS06	ROTH	VP6 PROTEIN		WHEAT DWARF VIRUS (WDV)	22-59						
VS06	ROTH	VP6 PROTEIN		SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	29-64						
VS06	ROTH	VP6 PROTEIN		SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	29-61						
VS06	ROTH	VP6 PROTEIN		PANICUM STREAK VIRUS	51-87						
VS06	ROTH	VP6 PROTEIN		SIMIAN 11 ROTAVIRUS (STRAIN SA11)	51-87						
VS06	ROTH	VP6 PROTEIN		TOBACCO YELLOW DWARF VIRUS (STRAIN AUSTRALIA) (TYDV)	28-62						
VS06	ROTH	VP6 PROTEIN		AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMPV)	65-101						
VS06	ROTH	VP6 PROTEIN		SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	100-132						
VS06	ROTH	VP6 PROTEIN		SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	129-167						
VS06	ROTH	VP6 PROTEIN		MAIZE STREAK VIRUS (NIGERIAN ISOLATE) (MSV)	122-155						
VS06	ROTH	VP6 PROTEIN		SOYBEAN CHLOROTIC MOTTLE VIRUS	99-137						
VS06	ROTH	VP6 PROTEIN		AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMPV)	250-282						
VS06	ROTH	VP6 PROTEIN		SULFOLOBUS VIRUS-LIKE PARTICLE SSV1	274-312	543-580					
VS06	ROTH	VP6 PROTEIN		FOWLPOX VIRUS (ISOLATE HP-438/MUNICH)	114-150						
VS06	ROTH	VP6 PROTEIN		HERPESVIRUS SAMIRI (SUBGROUP C / STRAIN 488)	206-244						
VS06	ROTH	VP6 PROTEIN		HERPESVIRUS SAMIRI (SUBGROUP C / STRAIN 488)	69-97						
VS06	ROTH	VP6 PROTEIN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	34-68						
VS06	ROTH	VP6 PROTEIN		BOVINE CORONA VIRUS	84-122						
VS06	ROTH	VP6 PROTEIN		BOVINE CORONA VIRUS (STRAIN F15)	41-75	137-165					
VS06	ROTH	VP6 PROTEIN		BOVINE CORONA VIRUS (STRAIN MEBUS)	41-75	137-165					
VS06	ROTH	VP6 PROTEIN		TURKEY ENTERIC CORONA VIRUS (TCV)	41-74	137-165					
VS06	ROTH	VP6 PROTEIN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	67-100						
VS06	ROTH	VP6 PROTEIN		EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	250-284						
VS06	ROTH	VP6 PROTEIN		COMMELINA YELLOW MOTTLE VIRUS (COYMV)	93-130	166-198					
VS06	ROTH	VP6 PROTEIN		COMMELINA YELLOW MOTTLE VIRUS (COYMV)	23-56						
VS06	ROTH	VP6 PROTEIN		POTATO VIRUS X (STRAIN XC) (PVX)	7-39						

PCGENE	P33CTL21P	All Viruses (no bacteriophages)	AREA1	AREA2	AREA3	AREA4	AREA5	AREA6	AREA7
FILE NAME	PROTEIN	VIRUS							
PYOR3_WCMVM	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	WHITE CLOVER MOSAIC VIRUS (STRAIN M) (WCMV)	63-94						
PYOR3_WCMVO	HYPOTHETICAL 13 KD PROTEIN (ORF 3)	WHITE CLOVER MOSAIC VIRUS (STRAIN O) (WCMV)	64-95						
PYOR3_ADEG1	HYPOTHETICAL 31.5 KD PROTEIN (ORF 5)	AVIAN ADENOVIRUS GAL1	237-272						
PYOR3_TTV1	HYPOTHETICAL 7.1 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	5-34						
PYOR3_TTV1	HYPOTHETICAL 38.6 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	233-263						
PYOR3_TTV1	HYPOTHETICAL 20.2 KD PROTEIN	THERMOPROTEUS TENAX VIRUS 1 (STRAIN KRA1) (TTV1)	91-124						
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN (ORF 1)	RICE TUNGRO BACILLIFORM VIRUS (RTBV)	104-133	159-191					
PYP24_RTBV	HYPOTHETICAL P24 PROTEIN (ORF 1)	RICE TUNGRO BACILLIFORM VIRUS (ISOLATE PHILIPPINES) (RTBV)	104-133	159-191					
PYP47_NPVAC	HYPOTHETICAL 43.5 KD PROTEIN IN P47 REGION	RICE TUNGRO BACILLIFORM VIRUS (ACMNPV)	23-51						
PYR35_HSV6G	HYPOTHETICAL PROTEIN RFS	AUTOGRAHA CALIFORNICA NUCLEAR POLYHEDROSIS VIRUS (ACMNPV)	180-216						
PYR35_HSV6G	HYPOTHETICAL BRRF2 PROTEIN	HERPES SIMPLEX VIRUS (TYPE 6 / STRAIN GS)	13-42						
PYR35_HSV6G	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	92-120						
PYR35_HSV6G	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	306-336						
PYR35_HSV6G	HYPOTHETICAL BRRF1 PROTEIN	EPSTEIN-BARR VIRUS (STRAIN B95-8) (HUMAN HERPESVIRUS 4)	21-53						
PYR35_HSV6G	HYPOTHETICAL 18.2 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	21-49						
PYR35_HSV6G	HYPOTHETICAL 9.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	22-53						
PYR35_HSV6G	HYPOTHETICAL 10.8 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	31-64						
PYR35_HSV6G	HYPOTHETICAL 10.4 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	8-42						
PYR35_HSV6G	HYPOTHETICAL 12.9 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	7-35						
PYR35_HSV6G	HYPOTHETICAL 11.6 KD PROTEIN	VACCINIA VIRUS (STRAIN COPENHAGEN)	29-57						
PZNP_LYCA	ZINC FINGER PROTEIN	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN ARMSTRONG)	8-32						
PZNP_LYCV	ZINC FINGER PROTEIN (FRAGMENT)	LYMPHOCYTIC CHORIOMENINGITIS VIRUS (STRAIN PASTEUR)							

TABLE XV
RESPIRATORY SYNCYTIAL VIRUS DP107 F2 REGION ANALOG
CARBOXY TRUNCATIONS

- T,3200
- 5 X-YTS-Z
X-YTSV-Z
X-YTSVI-Z
X-YTSVIT-Z
X-YTSVITI-Z
X-YTSVITIE-Z
X-YTSVITIEL-Z
X-YTSVITIELS-Z
X-YTSVITIELSN-Z
10 X-YTSVITIELSNI-Z
X-YTSVITIELSNIK-Z
X-YTSVITIELSNIKE-Z
X-YTSVITIELSNIKEN-Z
X-YTSVITIELSNIKENK-Z
X-YTSVITIELSNIKENKC-Z
X-YTSVITIELSNIKENKCN-Z
X-YTSVITIELSNIKENKCNG-Z
15 X-YTSVITIELSNIKENKCGT-Z
X-YTSVITIELSNIKENKCGTD-Z
X-YTSVITIELSNIKENKCGTDA-Z
X-YTSVITIELSNIKENKCGTDAK-Z
X-YTSVITIELSNIKENKCGTDAKV-Z
X-YTSVITIELSNIKENKCGTDAKVK-Z
X-YTSVITIELSNIKENKCGTDAKVKL-Z
20 X-YTSVITIELSNIKENKCGTDAKVKLI-Z
X-YTSVITIELSNIKENKCGTDAKVKLIK-Z
X-YTSVITIELSNIKENKCGTDAKVKLIQ-Z
X-YTSVITIELSNIKENKCGTDAKVKLIQE-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQEL-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELD-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDK-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKY-Z
25 X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYK-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKN-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNA-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAV-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTE-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTEL-Z
30 X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQ-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQL-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQLL-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQLLM-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQLLMQ-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQLLMQS-Z
X-YTSVITIELSNIKENKCGTDAKVKLIKQELDKYKNAVTELQLLMQST-Z (SEQ ID NO:16)

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The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxycarbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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TABLE XVI
RESPIRATORY SYNCYTIAL VIRUS F2 DP178/DP107 REGION ANALOG
AMINO TRUNCATIONS

	X-QST-Z
	X-MQST-Z
5	X-LMQST-Z
	X-LLMQST-Z
	X-QLLMQST-Z
	X-LQLLMQST-Z
	X-ELQLLMQST-Z
	X-TELQLLMQST-Z
	X-VTELQLLMQST-Z
10	X-AVTELQLLMQST-Z
	X-NAVTELQLLMQST-Z
	X-KNAVTELQLLMQST-Z
	X-YKNAVTELQLLMQST-Z
	X-KYKNAVTELQLLMQST-Z
	X-DKYKNAVTELQLLMQST-Z
	X-LDKYKNAVTELQLLMQST-Z
	X-ELDKYKNAVTELQLLMQST-Z
15	X-QELDKYKNAVTELQLLMQST-Z
	X-KQELDKYKNAVTELQLLMQST-Z
	X-IKQELDKYKNAVTELQLLMQST-Z
	X-LIKQELDKYKNAVTELQLLMQST-Z
	X-KLIKQELDKYKNAVTELQLLMQST-Z
	X-VKLIKQELDKYKNAVTELQLLMQST-Z
	X-KVKLIKQELDKYKNAVTELQLLMQST-Z
20	X-AKVLIKQELDKYKNAVTELQLLMQST-Z
	X-DAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-TDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-GTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-NGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-CNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-KCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-NKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
25	X-KENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-IKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-NIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-SNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-LSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-ELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-IELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
30	X-TIELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-ITIELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-VITIELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-SVITIELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z
	X-TSVITIELSNIKENKCNGTDAKVLIKQELDKYKNAVTELQLLMQST-Z

The one letter amino acid code is used.

35 Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (FMOC) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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TABLE XVII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
CARBOXY TRUNCATIONS

	X-FYD-Z
	X-FYDP-Z
	X-FYDPL-Z
5	X-FYDPLV-Z
	X-FYDPLVF-Z
	X-FYDPLVFP-Z
	X-FYDPLVFPS-Z
	X-FYDPLVFPSD-Z
	X-FYDPLVFPSDE-Z
	X-FYDPLVFPSDEF-Z
10	X-FYDPLVFPSDEFD-Z
	X-FYDPLVFPSDEFDA-Z
	X-FYDPLVFPSDEFDAS-Z
	X-FYDPLVFPSDEFDASI-Z
	X-FYDPLVFPSDEFDASIS-Z
	X-FYDPLVFPSDEFDASISQ-Z
	X-FYDPLVFPSDEFDASISQV-Z
	X-FYDPLVFPSDEFDASISQVN-Z
15	X-FYDPLVFPSDEFDASISQVNE-Z
	X-FYDPLVFPSDEFDASISQVNEK-Z
	X-FYDPLVFPSDEFDASISQVNEKI-Z
	X-FYDPLVFPSDEFDASISQVNEKIN-Z
	X-FYDPLVFPSDEFDASISQVNEKINQ-Z
	X-FYDPLVFPSDEFDASISQVNEKINQS-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSL-Z
20	X-FYDPLVFPSDEFDASISQVNEKINQSLA-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAF-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFI-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIR-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRK-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKS-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSD-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDE-Z
25	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDEL-Z
	X-FYDPLVFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z

(SEQ ID NO:17)

The one letter amino acid code is used.

Additionally,

"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxyl, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier

group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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TABLE XVIII
RESPIRATORY SYNCYTIAL VIRUS F1 DP178 REGION ANALOG
AMINO TRUNCATIONS

T₃₂₆₀

	X-DELL-Z
	X-SDELL-Z
5	X-KSDELL-Z
	X-RKSDELL-Z
	X-IRKSDELL-Z
	X-FIRKSDELL-Z
	X-AFIRKSDELL-Z
	X-LAFIRKSDELL-Z
	X-SLAFIRKSDELL-Z
10	X-QSLAFIRKSDELL-Z
	X-NQSLAFIRKSDELL-Z
	X-INQSLAFIRKSDELL-Z
	X-KINQSLAFIRKSDELL-Z
	X-EKINQSLAFIRKSDELL-Z
	X-NEKINQSLAFIRKSDELL-Z
	X-VNEKINQSLAFIRKSDELL-Z
	X-QVNEKINQSLAFIRKSDELL-Z
15	X-SQVNEKINQSLAFIRKSDELL-Z
	X-ISQVNEKINQSLAFIRKSDELL-Z
	X-SISQVNEKINQSLAFIRKSDELL-Z
	X-ASISQVNEKINQSLAFIRKSDELL-Z
	X-DASISQVNEKINQSLAFIRKSDELL-Z
	X-FDASISQVNEKINQSLAFIRKSDELL-Z
	X-EFDASISQVNEKINQSLAFIRKSDELL-Z
20	X-DEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-SDEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-PSDEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-FPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-VFPSDEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-LVFPDEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-PLVFPDEFDASISQVNEKINQSLAFIRKSDELL-Z
25	X-DPLVFPDEFDASISQVNEKINQSLAFIRKSDELL-Z
	X-YDPLVFPDEFDASISQVNEKINQSLAFIRKSDELL-Z

— p The one letter amino acid code is used.

p Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxy, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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p "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

TABLE XIX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
CARBOXY TRUNCATIONS

T₁3270

5 X-ITL-Z
X-ITLN-Z
X-ITLNN-Z
X-ITLNNS-Z
X-ITLNNSV-Z
X-ITLNNSVA-Z
X-ITLNNSVAL-Z
X-ITLNNSVALD-Z
X-ITLNNSVALDP-Z
X-ITLNNSVALDPI-Z
10 X-ITLNNSVALDPID-Z
X-ITLNNSVALDPIDI-Z
X-ITLNNSVALDPIDIS-Z
X-ITLNNSVALDPIDISI-Z
X-ITLNNSVALDPIDISIE-Z
X-ITLNNSVALDPIDISIEL-Z
X-ITLNNSVALDPIDISIELN-Z
X-ITLNNSVALDPIDISIELNK-Z
15 X-ITLNNSVALDPIDISIELNKA-Z
X-ITLNNSVALDPIDISIELNKAK-Z
X-ITLNNSVALDPIDISIELNKAKS-Z
X-ITLNNSVALDPIDISIELNKAKSD-Z
X-ITLNNSVALDPIDISIELNKAKSDL-Z
X-ITLNNSVALDPIDISIELNKAKSDLE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEE-Z
20 X-ITLNNSVALDPIDISIELNKAKSDLEES-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESK-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKE-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEW-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWI-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRR-Z
X-ITLNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z (SEQ ID NO:18)

25 p The one letter amino acid code is used.

p Additionally,
"X" may represent an amino group, a hydrophobic group,
including but not limited to carbobenzoxy, dansyl, or
T-butyloxycarbonyl; an acetyl group; a 9-
30 fluorenylmethoxy-carbonyl (Fmoc) group; a
macromolecular carrier group including but not limited
to lipid-fatty acid conjugates, polyethylene glycol,
or carbohydrates.

p "Z" may represent a carboxyl group; an amido group; a
T-butyloxycarbonyl group; a macromolecular carrier
group including but not limited to lipid-fatty acid
35 conjugates, polyethylene glycol, or carbohydrates.

TABLE XX
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP178 ANALOG
AMINO TRUNCATIONS

T₁3280

	X-RRS-Z
	X-IRRS-Z
5	X-WIRRS-Z
	X-EWIRRS-Z
	X-KEWIRRS-Z
	X-SKEWIRRS-Z
	X-ESKEWIRRS-Z
	X-EESKEWIRRS-Z
	X-LEESKEWIRRS-Z
10	X-DLEESKEWIRRS-Z
	X-SDLEESKEWIRRS-Z
	X-KSDLEESKEWIRRS-Z
	X-AKSDLEESKEWIRRS-Z
	X-KAKSDLEESKEWIRRS-Z
	X-NKAKSDLEESKEWIRRS-Z
	X-LNKAKSDLEESKEWIRRS-Z
	X-ELNKAKSDLEESKEWIRRS-Z
15	X-IELNKAKSDLEESKEWIRRS-Z
	X-SIELNKAKSDLEESKEWIRRS-Z
	X-ISIELNKAKSDLEESKEWIRRS-Z
	X-DISIELNKAKSDLEESKEWIRRS-Z
	X-IDISIELNKAKSDLEESKEWIRRS-Z
	X-PIDISIELNKAKSDLEESKEWIRRS-Z
	X-DPIDISIELNKAKSDLEESKEWIRRS-Z
20	X-LDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-ALDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-VALDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-SVALDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-NSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-NNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-LNNSVALDPIDISIELNKAKSDLEESKEWIRRS-Z
	X-TLNNVALDPIDISIELNKAKSDLEESKEWIRRS-Z

25
p The one letter amino acid code is used.

p Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxy, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a
30 macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

p "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid
35 conjugates, polyethylene glycol, or carbohydrates.

TABLE XXI
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
CARBOXY TRUNCATIONS

T₁3290

	X-ALG-Z
	X-ALGV-Z
	X-ALGVA-Z
5	X-ALGVAT-Z
	X-ALGVATS-Z
	X-ALGVATSA-Z
	X-ALGVATSAQ-Z
	X-ALGVATSAQI-Z
	X-ALGVATSAQIT-Z
	X-ALGVATSAQITA-Z
10	X-ALGVATSAQITAA-Z
	X-ALGVATSAQITAAB-Z
	X-ALGVATSAQITAABA-Z
	X-ALGVATSAQITAABAL-Z
	X-ALGVATSAQITAABALV-Z
	X-ALGVATSAQITAABALVE-Z
	X-ALGVATSAQITAABALVEA-Z
	X-ALGVATSAQITAABALVEAK-Z
15	X-ALGVATSAQITAABALVEAKQ-Z
	X-ALGVATSAQITAABALVEAKQA-Z
	X-ALGVATSAQITAABALVEAKQAR-Z
	X-ALGVATSAQITAABALVEAKQARS-Z
	X-ALGVATSAQITAABALVEAKQARSD-Z
	X-ALGVATSAQITAABALVEAKQARSDI-Z
	X-ALGVATSAQITAABALVEAKQARSDIE-Z
20	X-ALGVATSAQITAABALVEAKQARSDIEK-Z
	X-ALGVATSAQITAABALVEAKQARSDIEKL-Z
	X-ALGVATSAQITAABALVEAKQARSDIEKLK-Z
	X-ALGVATSAQITAABALVEAKQARSDIEKLKE-Z
	X-ALGVATSAQITAABALVEAKQARSDIEKLKEA-Z
	X-ALGVATSAQITAABALVEAKQARSDIEKLKEAI-Z
	X-ALGVATSAQITAABALVEAKQARSDIEKLKEAIR-Z

(SEQ ID NO:19)

25p The one letter amino acid code is used.

p Additionally,
"X" may represent an amino group, a hydrophobic group,
including but not limited to carbobenzoxy, dansyl, or
T-butyloxycarbonyl; an acetyl group; a 9-
fluorenylmethoxy-carbonyl (Fmoc) group; a
30 macromolecular carrier group including but not limited
to lipid-fatty acid conjugates, polyethylene glycol,
or carbohydrates.

p "Z" may represent a carboxyl group; an amido group; a
T-butyloxycarbonyl group; a macromolecular carrier
group including but not limited to lipid-fatty acid
conjugates, polyethylene glycol, or carbohydrates.

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TABLE XXII
HUMAN PARAINFLUENZA VIRUS 3 F1 REGION DP107 ANALOG
AMINO TRUNCATIONS

T,3300

5	X-IRD-Z
	X-AIRD-Z
	X-EAIRD-Z
	X-KEAIRD-Z
	X-LKEAIRD-Z
	X-KLKEAIRD-Z
	X-EKLKEAIRD-Z
	X-IEKLKEAIRD-Z
	X-DIEKLKEAIRD-Z
10	X-SDIEKLKEAIRD-Z
	X-RSDIEKLKEAIRD-Z
	X-ARSDIEKLKEAIRD-Z
	X-QARSDIEKLKEAIRD-Z
	X-KQARSDIEKLKEAIRD-Z
	X-AKQARSDIEKLKEAIRD-Z
	X-EAKQARSDIEKLKEAIRD-Z
	X-VEAKQARSDIEKLKEAIRD-Z
15	X-LVEAKQARSDIEKLKEAIRD-Z
	X-ALVEAKQARSDIEKLKEAIRD-Z
	X-VALVEAKQARSDIEKLKEAIRD-Z
	X-AVALVEAKQARSDIEKLKEAIRD-Z
	X-AAVALVEAKQARSDIEKLKEAIRD-Z
	X-TAAVALVEAKQARSDIEKLKEAIRD-Z
	X-ITAAVALVEAKQARSDIEKLKEAIRD-Z
20	X-QITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-AQITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-SAQITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-TSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-ATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-VATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-GVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z
	X-LGVATSAQITAAVALVEAKQARSDIEKLKEAIRD-Z

25 p The one letter amino acid code is used.

p Additionally,
"X" may represent an amino group, a hydrophobic group, including but not limited to carbobenzoxy, dansyl, or T-butyloxycarbonyl; an acetyl group; a 9-fluorenylmethoxy-carbonyl (Fmoc) group; a
30 macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

p "Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid
35 conjugates, polyethylene glycol, or carbohydrates.

TABLE XXIII
REPRESENTATIVE DP107/DP178 ANALOG ANTIVIRAL PEPTIDES

Anti-Respiratory syncytial virus peptides

- 5 X-TSVITIELSNIKENKCNCTDAKVKLIKQELDKYKN-Z
X-SVITIELSNIKENKCNCTDAKVKLIKQELDKYKNA-Z
X-VITIELSNIKENKCNCTDAKVKLIKQELDKYKNAV-Z
X-VAVSKVLHLEGEVNKIALLLSTNKAVVSLNGVSV-Z (SEQ ID NO: 20)
X-AVSKVLHLEGEVNKIALLLSTNKAVVSLNGVSV-Z (SEQ ID NO: 21)
X-VSKVLHLEGEVNKIALLLSTNKAVVSLNGVSVL-Z (SEQ ID NO: 22)
X-SKVLHLEGEVNKIALLLSTNKAVVSLNGVSVLT-Z (SEQ ID NO: 23)
X-KVLHLEGEVNKIALLLSTNKAVVSLNGVSVLTS-Z (SEQ ID NO: 24)
X-LEGEVNKIALLLSTNKAVVSLNGVSVLT-SKVLD-Z (SEQ ID NO: 25)
10 X-GEVNKIALLLSTNKAVVSLNGVSVLT-SKVLDLKN-Z (SEQ ID NO: 26)
X-EVNKIALLLSTNKAVVSLNGVSVLT-SKVLDLKNY-Z (SEQ ID NO: 27)
X-VNKIALLLSTNKAVVSLNGVSVLT-SKVLDLKNYI-Z (SEQ ID NO: 28)
X-KIALLLSTNKAVVSLNGVSVLT-SKVLDLKNYID-Z (SEQ ID NO: 29)
X-IALLLSTNKAVVSLNGVSVLT-SKVLDLKNYIDK-Z (SEQ ID NO: 30)
X-ALLSTNKAVVSLNGVSVLT-SKVLDLKNYIDKQ-Z (SEQ ID NO: 31)
X-VAVSKVLHLEGEVNKIALLLSTNKAVVSLNGVSV-Z (SEQ ID NO: 32)
15 X-AVSKVLHLEGEVNKIALLLSTNKAVVSLNGVSV-Z
X-VSKVLHLEGEVNKIALLLSTNKAVVSLNGVSVL-Z
X-SKVLHLEGEVNKIALLLSTNKAVVSLNGVSVLT-Z
X-KVLHLEGEVNKIALLLSTNKAVVSLNGVSVLTS-Z
X-LEGEVNKIALLLSTNKAVVSLNGVSVLT-SKVLD-Z
X-GEVNKIALLLSTNKAVVSLNGVSVLT-SKVLDLKN-Z
X-EVNKIALLLSTNKAVVSLNGVSVLT-SKVLDLKNY-Z
20 X-VNKIALLLSTNKAVVSLNGVSVLT-SKVLDLKNYI-Z
X-KIALLLSTNKAVVSLNGVSVLT-SKVLDLKNYID-Z
X-IALLLSTNKAVVSLNGVSVLT-SKVLDLKNYIDK-Z
X-ALLSTNKAVVSLNGVSVLT-SKVLDLKNYIDKQ-Z

Anti-human parainfluenza virus 3 peptides

- 25 X-TLNNSVALDPIDISIELNKAQSDLEESKEWIRRSN-Z (SEQ ID NO: 33)
X-LNNSVALDPIDISIELNKAQSDLEESKEWIRRSNQ-Z (SEQ ID NO: 34)
X-NNSVALDPIDISIELNKAQSDLEESKEWIRRSNQK-Z (SEQ ID NO: 35)
X-NSVALDPIDISIELNKAQSDLEESKEWIRRSNQKL-Z (SEQ ID NO: 36)
X-SVALDPIDISIELNKAQSDLEESKEWIRRSNQKLD-Z (SEQ ID NO: 37)
X-VALDPIDISIELNKAQSDLEESKEWIRRSNQKLD-S-Z (SEQ ID NO: 38)
X-ALDPIDISIELNKAQSDLEESKEWIRRSNQKLD-SI-Z (SEQ ID NO: 39)
30 X-LDPIDISIELNKAQSDLEESKEWIRRSNQKLD-SIG-Z (SEQ ID NO: 40)
X-DPIDISIELNKAQSDLEESKEWIRRSNQKLD-SIGN-Z (SEQ ID NO: 41)
X-PIDISIELNKAQSDLEESKEWIRRSNQKLD-SIGNW-Z (SEQ ID NO: 42)
X-IDISIELNKAQSDLEESKEWIRRSNQKLD-SIGNWH-Z (SEQ ID NO: 43)
X-DISIELNKAQSDLEESKEWIRRSNQKLD-SIGNWHQ-Z (SEQ ID NO: 44)
X-ISIELNKAQSDLEESKEWIRRSNQKLD-SIGNWHQS-Z (SEQ ID NO: 45)
X-SIELNKAQSDLEESKEWIRRSNQKLD-SIGNWHQSS-Z (SEQ ID NO: 46)
X-IELNKAQSDLEESKEWIRRSNQKLD-SIGNWHQSST-Z (SEQ ID NO: 47)
35 X-ELNKAQSDLEESKEWIRRSNQKLD-SIGNWHQSSTT-Z (SEQ ID NO: 48)
X-TAAVALVEAKQARSIDIEKLKEAIRDTNKAVQSVQS-Z (SEQ ID NO: 49)

X-AVALVEAKQARSDIEKLKEAIRD TNKAVQSVQSSI-Z> (SEQ ID NO: 50)
 X-LVEAKQARSDIEKLKEAIRD TNKAVQSVQSSIGNL-Z> (SEQ ID NO: 51)
 X-VEAKQARSDIEKLKEAIRD TNKAVQSVQSSIGNLI-Z> (SEQ ID NO: 52)
 X-EAKQARSDIEKLKEAIRD TNKAVQSVQSSIGNLIV-Z> (SEQ ID NO: 53)
 X-AKQARSDIEKLKEAIRD TNKAVQSVQSSIGNLIVA-Z> (SEQ ID NO: 54)
 X-KQARSDIEKLKEAIRD TNKAVQSVQSSIGNLIVAI-Z> (SEQ ID NO: 55)
 X-QARSDIEKLKEAIRD TNKAVQSVQSSIGNLIVAIK-Z> (SEQ ID NO: 56)
 5 X-ARSDIEKLKEAIRD TNKAVQSVQSSIGNLIVAIKS-Z> (SEQ ID NO: 57)
 X-RSDIEKLKEAIRD TNKAVQSVQSSIGNLIVAIKSV-Z> (SEQ ID NO: 58)
 X-SDIEKLKEAIRD TNKAVQSVQSSIGNLIVAIKSVQ-Z> (SEQ ID NO: 59)
 X-KLKEAIRD TNKAVQSVQSSIGNLIVAIKSVQDYVN-Z> (SEQ ID NO: 60)
 X-LKEAIRD TNKAVQSVQSSIGNLIVAIKSVQDYV NK-Z> (SEQ ID NO: 61)
 X-AIRD TNKAVQSVQSSIGNLIVAIKSVQDYVNKEIV-Z> (SEQ ID NO: 62)

10 Anti-simian immunodeficiency virus peptides

X-WQEWERKVD FLEENITALLEEAQIQQEK NMYELQK-Z> (SEQ ID NO: 63)
 X-QEWERKVD FLEENITALLEEAQIQQEK NMYELQKL-Z> (SEQ ID NO: 64)
 X-EWERKVD FLEENITALLEEAQIQQEK NMYELQKLN-Z> (SEQ ID NO: 65)
 X-WERKVD FLEENITALLEEAQIQQEK NMYELQKLNS-Z> (SEQ ID NO: 66)
 X-ERKVD FLEENITALLEEAQIQQEK NMYELQKLNSW-Z> (SEQ ID NO: 67)
 X-RKVD FLEENITALLEEAQIQQEK NMYELQKLNSWD-Z> (SEQ ID NO: 68)
 15 X-KVD FLEENITALLEEAQIQQEK NMYELQKLNSWDV-Z> (SEQ ID NO: 69)
 X-VDFLEENITALLEEAQIQQEK NMYELQKLNSWDVF-Z> (SEQ ID NO: 70)
 X-DFLEENITALLEEAQIQQEK NMYELQKLNSWDVFG-Z> (SEQ ID NO: 71)
 X-FLEENITALLEEAQIQQEK NMYELQKLNSWDVFGN-Z> (SEQ ID NO: 72)

Anti-measles virus peptides

20 X-LHRIDLGPPI SLERLDVGTNLGN AIAKLEAKELL-Z> (SEQ ID NO: 73)
 X-HRIDLGPPISLERLDVGTNLGN AIAKLEAKELLE-Z> (SEQ ID NO: 74)
 X-RIDLGPPI SLERLDVGTNLGN AIAKLEAKELLES-Z> (SEQ ID NO: 75)
 X-IDLGPPISLERLDVGTNLGN AIAKLEAKELLESS-Z> (SEQ ID NO: 76)
 X-DLGPPISLERLDVGTNLGN AIAKLEAKELLESSD-Z> (SEQ ID NO: 77)
 X-LGPPISLERLDVGTNLGN AIAKLEAKELLESSDQ-Z> (SEQ ID NO: 78)
 X-GPPISLERLDVGTNLGN AIAKLEAKELLESSDQI-Z> (SEQ ID NO: 79)
 25 X-PPISLERLDVGTNLGN AIAKLEAKELLESSDQIL-Z> (SEQ ID NO: 80)
 X-PISLERLDVGTNLGN AIAKLEAKELLESSDQILR-Z> (SEQ ID NO: 81)
 X-SLERLDVGTNLGN AIAKLEAKELLESSDQILRSM-Z> (SEQ ID NO: 82)
 X-LERLDVGTNLGN AIAKLEAKELLESSDQILRSMK-Z> (SEQ ID NO: 83)

The one letter amino acid code is used.

30p Additionally,
 "X" may represent an amino group, a hydrophobic group,
 including but not limited to carbobenzoxy, dansyl, or
 T-butyloxycarbonyl; an acetyl group; a 9-
 fluorenylmethoxy-carbonyl (Fmoc) group; a
 macromolecular carrier group including but not limited
 to lipid-fatty acid conjugates, polyethylene glycol,
 or carbohydrates.

35

p

"Z" may represent a carboxyl group; an amido group; a T-butyloxycarbonyl group; a macromolecular carrier group including but not limited to lipid-fatty acid conjugates, polyethylene glycol, or carbohydrates.

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CLV/L 5.4. SYNTHESIS OF PEPTIDES

The peptides of the invention may be synthesized or prepared by techniques well known in the art. See, for example, Creighton, 1983, Proteins: Structures
5 and Molecular Principles, W.H. Freeman and Co., NY, which is incorporated herein by reference in its entirety. Short peptides, for example, can be synthesized on a solid support or in solution. Longer
10 peptides may be made using recombinant DNA techniques. Here, the nucleotide sequences encoding the peptides of the invention may be synthesized, and/or cloned, and expressed according to techniques well known to those of ordinary skill in the art. See, for example,
15 Sambrook, et al., 1989, Molecular Cloning, A Laboratory Manual, Vols. 1-3, Cold Spring Harbor Press, NY.

The peptides of the invention may alternatively be synthesized such that one or more of the bonds which link the amino acid residues of the peptides are
20 non-peptide bonds. These alternative non-peptide bonds may be formed by utilizing reactions well known to those in the art, and may include, but are not limited to imino, ester, hydrazide, semicarbazide, and
25 azo bonds, to name but a few. In yet another embodiment of the invention, peptides comprising the sequences described above may be synthesized with additional chemical groups present at their amino
and/or carboxy termini, such that, for example, the stability, bioavailability, and/or inhibitory activity
30 of the peptides is enhanced. For example, hydrophobic groups such as carbobenzoxy, dansyl, or t-butyloxycarbonyl groups, may be added to the peptides' amino termini. Likewise, an acetyl group or a 9-fluorenylmethoxy-carbonyl group may be placed at the
35 peptides' amino termini. (See "X" in Tables I to IV,

above.) Additionally, the hydrophobic group, t-butyloxycarbonyl, or an amido group may be added to the peptides' carboxy termini. (See "Z" in Tables I to IV, above.)

5 Further, the peptides of the invention may be synthesized such that their steric configuration is altered. For example, the D-isomer of one or more of the amino acid residues of the peptide may be used, rather than the usual L-isomer.

10 Still further, at least one of the amino acid residues of the peptides of the invention may be substituted by one of the well known non-naturally occurring amino acid residues. Alterations such as these may serve to increase the stability, bioavailability and/or inhibitory action of the
15 peptides of the invention.

Any of the peptides described above may, additionally, have a macromolecular carrier group covalently attached to their amino and/or carboxy termini. Such macromolecular carrier groups may
20 include, for example, lipid-fatty acid conjugates, polyethylene glycol, carbohydrates or additional peptides. "X", in Tables I to IV, above, may therefore additionally represent any of the above macromolecular carrier groups covalently attached to
25 the amino terminus of a peptide, with an additional peptide group being preferred. Likewise, "Z", in Tables I to IV, may additionally represent any of the macromolecular carrier groups described above.

30 *CL 012* 5.5. ASSAYS FOR ANTI-MEMBRANE FUSION ACTIVITY

Described herein, are methods for ability of a compound, such as the peptides of the invention, to inhibit membrane fusion events. Specifically, assays for cell fusion events are described in Section 5.5.1,
35

below, and assays for antiviral activity are described in Section 5.5.2, below.

CL V/L 5.5.1 ASSAYS FOR CELL FUSION EVENTS

5 Assays for cell fusion events are well known to those of skill in the art, and may be used in conjunction, for example, with the peptides of the invention to test the peptides' antifusogenic capabilities.

10 Cell fusion assays are generally performed in vitro. Such an assay may comprise culturing cells which, in the absence of any treatment would undergo an observable level of syncytial formation. For example, uninfected cells may be incubated in the presence of cells chronically infected with a virus
15 that induces cell fusion. Such viruses may include, but are not limited to, HIV, SIV, or respiratory syncytial virus.

For the assay, cells are incubated in the presence of a peptide to be assayed. For each
20 peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added.

Standard conditions for culturing cells, well known to those of ordinary skill in the art, are used.
25 After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytial formation. Well known stains, such as
30 crystal violet stain, may be used to facilitate the visualization of syncytial formation.

CL V/L 5.5.2 ASSAYS FOR ANTIVIRAL ACTIVITY

35 The antiviral activity exhibited by the peptides of the invention may be measured, for example, by

easily performed in vitro assays, such as those described below, which can test the peptides' ability to inhibit syncytia formation, or their ability to inhibit infection by cell-free virus. Using these assays, such parameters as the relative antiviral activity of the peptides, exhibit against a given strain of virus and/or the strain specific inhibitory activity of the peptide can be determined.

A cell fusion assay may be utilized to test the peptides' ability to inhibit viral-induced, such as HIV-induced, syncytia formation in vitro. Such an assay may comprise culturing uninfected cells in the presence of cells chronically infected with a syncytial-inducing virus and a peptide to be assayed. For each peptide, a range of peptide concentrations may be tested. This range should include a control culture wherein no peptide has been added. Standard conditions for culturing, well known to those of ordinary skill in the art, are used. After incubation for an appropriate period (24 hours at 37°C, for example) the culture is examined microscopically for the presence of multinucleated giant cells, which are indicative of cell fusion and syncytia formation. Well known stains, such as crystal violet stain, may be used to facilitate syncytial visualization. Taking HIV as an example, such an assay would comprise CD-4⁺ cells (such as Molt or CEM cells, for example) cultured in the presence of chronically HIV-infected cells and a peptide to be assayed.

Other well known characteristics of viral infection may also be assayed to test a peptide's antiviral capabilities. Once again taking HIV as an example, a reverse transcriptase (RT) assay may be utilized to test the peptides' ability to inhibit infection of CD-4⁺ cells by cell-free HIV. Such an assay may comprise culturing an appropriate

concentration (i.e., TCID₅₀) of virus and CD-4⁺ cells in the presence of the peptide to be tested. Culture conditions well known to those in the art are used. As above, a range of peptide concentrations may be used, in addition to a control culture wherein no peptide has been added. After incubation for an appropriate period (e.g., 7 days) of culturing, a cell-free supernatant is prepared, using standard procedures, and tested for the presence of RT activity as a measure of successful infection. The RT activity may be tested using standard techniques such as those described by, for example, Goff et al. (Goff, S. et al., 1981, J. Virol. 38:239-248) and/or Willey et al. (Willey, R. et al., 1988, J. Virol. 62:139-147). These references are incorporated herein by reference in their entirety.

Standard methods which are well-known to those of skill in the art may be utilized for assaying non-retroviral activity. See, for example, Pringle et al. (Pringle, C.R. et al., 1985, J. Medical Virology 17:377-386) for a discussion of respiratory syncytial virus and parainfluenza virus activity assay techniques. Further, see, for example, "Zinsser Microbiology", 1988, Joklik, W.K. et al., eds., Appleton & Lange, Norwalk, CT, 19th ed., for a general review of such techniques. These references are incorporated by reference herein in their entirety. In addition, the Examples presented below, in Sections 17, 18, 26 and 27 each provide additional assays for the testing of a compound's antiviral capability.

In vivo assays may also be utilized to test, for example, the antiviral activity of the peptides of the invention. To test for anti-HIV activity, for example, the in vivo model described in Barnett et al. (Barnett, S.W. et al., 1994, Science 266:642-646) may be used.

Additionally, anti-RSV activity can be assayed in vivo via well known mouse models. For example, RSV can be administered intranasally to mice of various inbred strains. Virus replicates in lungs of all strains, but the highest titers are obtained in P/N, C57L/N and DBA/2N mice. Infection of BALB/c mice produces an asymptomatic bronchiolitis characterized by lymphocytic infiltrates and pulmonary virus titers of 10^4 to 10^5 pfu/g of lung tissue (Taylor, G. et al., 1984, Infect. Immun. 43:649-655).

Cotton rat models of RSV are also well known. Virus replicates to high titer in the nose and lungs of the cotton rat but produces few if any signs of inflammation.

¹⁵ CL D/L 5.6. USES OF THE PEPTIDES OF THE INVENTION

¹⁰ P The peptides of the invention may be utilized as antifusogenic or antiviral compounds, or as compounds which modulate intracellular processes involving coiled coil peptide structures. Further, such peptides may be used to identify agents which exhibit antifusogenic, antiviral or intracellular modulatory activity. Still further, the peptides of the invention may be utilized as organism or viral type/subtype-specific diagnostic tools.

²⁵ The antifusogenic capability of the peptides of the invention may additionally be utilized to inhibit or treat/ameliorate symptoms caused by processes involving membrane fusion events. Such events may include, for example, virus transmission via cell-cell fusion, abnormal neurotransmitter exchange via cell-fusion, and sperm-egg fusion. Further, the peptides of the invention may be used to inhibit free viral, such as retroviral, particularly HIV, transmission to uninfected cells wherein such viral infection involves membrane fusion events or involves fusion of a viral

structure with a cell membrane. Among the intracellular disorders involving coiled coil peptides structures which may be ameliorated by the peptides of the invention are disorders involving, for example, bacterial toxins.

5 With respect to antiviral activity, the viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to all strains of the viruses listed above, in Tables V through VII, and IX through XIV.

10 These viruses include, for example, human retroviruses, particularly HIV-1 and HIV-2 and the human T-lymphocyte viruses (HTLV-I and II). The non-human retroviruses whose transmission may be inhibited by the peptides of the invention include, but are not
15 limited to bovine leukosis virus, feline sarcoma and leukemia viruses, simian immunodeficiency, sarcoma and leukemia viruses, and sheep progress pneumonia viruses.

20 Non retroviral viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to human respiratory syncytial virus, canine distemper virus, newcastle disease virus, human parainfluenza virus, influenza viruses, measles viruses, Epstein-Barr viruses, hepatitis B
25 viruses, and simian Mason-Pfizer viruses.

Non enveloped viruses whose transmission may be inhibited by the peptides of the invention include, but are not limited to picornaviruses such as polio viruses, hepatitis A virus, enterovirus, echoviruses
30 and coxsackie viruses, papovaviruses such as papilloma virus, parvoviruses, adenoviruses and reoviruses.

As discussed more fully, below, in Section 5.5.1 and in the Example presented, below, in Section 8, DP107, DP178, DP107 analog and DP178 analog peptides
35 form non-covalent protein-protein interactions which

are required for normal activity of the virus. Thus, the peptides of the invention may also be utilized as components in assays for the identification of compounds that interfere with such protein-protein interactions and may, therefore, act as antiviral agents. These assays are discussed, below, in Section 5.5.1.

As demonstrated in the Example presented below in Section 6, the antiviral activity of the peptides of the invention may show a pronounced type and subtype specificity, i.e., specific peptides may be effective
* in inhibiting the activity of only specific viruses. This feature of the invention presents many advantages. One such advantage, for example, lies in the field of diagnostics, wherein one can use the antiviral specificity of the peptide of the invention to ascertain the identity of a viral isolate. With respect to HIV, one may easily determine whether a viral isolate consists of an HIV-1 or HIV-2 strain. For example, uninfected CD-4⁺ cells may be co-infected with an isolate which has been identified as containing HIV the DP178 (SEQ ID:1) peptide, after which the retroviral activity of cell supernatants may be assayed, using, for example, the techniques described above in Section 5.2. Those isolates whose retroviral activity is completely or nearly completely inhibited contain HIV-1. Those isolates whose viral activity is unchanged or only reduced by a small amount, may be considered to not contain HIV-1. Such an isolate may then be treated with one or more of the other DP178 peptides of the invention, and subsequently be tested for its viral activity in order to determine the identify of the viral isolate. The DP107 and DP178 analogs of the invention may also be utilized in a diagnostic capacity specific to the type and subtype of virus or organism in which the specific

peptide sequence is found. A diagnostic procedure as described, above, for DP178, may be used in conjunction with the DP107/DP178 analog of interest.

CLV/L 5.5.1. SCREENING ASSAYS

5 As demonstrated in the Example presented in Section 8, below, DP107 and DP178 portions of the TM protein gp41 form non-covalent protein-protein interactions. As is also demonstrated, the maintenance of such interactions is necessary for
10 normal viral infectivity. Thus, compounds which bind DP107, bind DP178, and/or act to disrupt normal DP107/DP178 protein-protein interactions may act as antifusogenic, antiviral or cellular modulatory agents. Described below are assays for the
15 identification of such compounds. Note that, while, for ease and clarity of discussion, DP107 and DP178 peptides will be used as components of the assays described, but it is to be understood that any of the DP107 analog or DP178 analog peptides described,
20 above, in Sections 5.1 through 5.3 may also be utilized as part of these screens for compounds.

Compounds which may be tested for an ability to bind DP107, DP178, and/or disrupt DP107/DP178 interactions, and which therefore, potentially
25 represent antifusogenic, antiviral or intracellular modulatory compounds, include, but are not limited to, peptides made of D- and/or L-configuration amino acids (in, for example, the form of random peptide libraries; see Lam, K.S. et al., 1991, Nature 354:82-
30 84), phosphopeptides (in, for example, the form of random or partially degenerate, directed phosphopeptide libraries; see, for example, Songyang, Z. et al., 1993, Cell 72:767-778), antibodies, and small organic or inorganic molecules. Synthetic
35 compounds, natural products, and other sources of

potentially effective materials may be screened in a variety of ways, as described in this Section.

The compounds, antibodies, or other molecules identified may be tested, for example, for an ability to inhibit cell fusion or viral activity, utilizing, for example, assays such as those described, above, in Section 5.5.

Among the peptides which may be tested are soluble peptides comprising DP107 and/or DP178 domains, and peptides comprising DP107 and/or DP178 domains having one or more mutations within one or both of the domains, such as the M41-P peptide described, below, in the Example presented in Section 8, which contains a isoleucine to proline mutation within the DP178 sequence.

In one embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

PO (a) exposing at least one compound to a peptide comprising a DP107 peptide for a time sufficient to allow binding of the compound to the DP107 peptide;

PO (b) removing non-bound compounds; and

PO (c) determining the presence of the compound bound to the DP107 peptide, thereby identifying an agent to be tested for antiviral ability.

In a second embodiment of such screening methods is a method for identifying a compound to be tested for antiviral ability comprising:

PO (a) exposing at least one compound to a peptide comprising a DP178 peptide for a time sufficient to allow binding of the compound to the DP178 peptide;

PO (b) removing non-bound compounds; and

PØ (c) determining the presence of the compound bound to the DP178 peptide, thereby identifying an agent to be tested for antiviral ability.

5 P One method utilizing these types of approaches that may be pursued in the isolation of such DP107-binding or DP178-binding compounds is an assay which would include the attachment of either the DP107 or the DP178 peptide to a solid matrix, such as, for example, agarose or plastic beads, microtiter plate
10 wells, petri dishes, or membranes composed of, for example, nylon or nitrocellulose. In such an assay system, either the DP107 or DP178 protein may be anchored onto a solid surface, and the compound, or test substance, which is not anchored, is labeled,
15 either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored component may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be accomplished simply by coating the solid surface
20 with a solution of the protein and drying.

Alternatively, an immobilized antibody, preferably a monoclonal antibody, specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and
25 stored.

In order to conduct the assay, the labeled compound is added to the coated surface containing the anchored DP107 or DP178 peptide. After the reaction is complete, unreacted components are removed (e.g.,
30 by washing) under conditions such that any complexes formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the compound is pre-labeled, the detection of
35 label immobilized on the surface indicates that

complexes were formed. Where the labeled component is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the compound (the antibody, in turn, may be directly labeled or
5 indirectly labeled with a labeled anti-Ig antibody).

Alternatively, such an assay can be conducted in a liquid phase, the reaction products separated from unreacted components, and complexes detected; e.g.,
10 using an immobilized antibody specific for DP107 or DP178, whichever is appropriate for the given assay, or an antibody specific for the compound, i.e., the test substance, in order to anchor any complexes formed in solution, and a labeled antibody specific for the other member of the complex to detect anchored
15 complexes.

By utilizing procedures such as this, large numbers of types of molecules may be simultaneously screened for DP107 or DP178-binding capability, and thus potential antiviral activity.

20 Further, compounds may be screened for an ability to inhibit the formation of or, alternatively, disrupt DP107/DP178 complexes. Such compounds may then be tested for antifusogenic, antiviral or intercellular modulatory capability. For ease of description, DP107
25 and DP178 will be referred to as "binding partners." Compounds that disrupt such interactions may exhibit antiviral activity. Such compounds may include, but are not limited to molecules such as antibodies, peptides, and the like described above.

30 The basic principle of the assay systems used to identify compounds that interfere with the interaction between the DP107 and DP178 peptides involves preparing a reaction mixture containing peptides under conditions and for a time sufficient to allow the two
35 peptides to interact and bind, thus forming a complex.

In order to test a compound for disruptive activity, the reaction is conducted in the presence and absence of the test compound, i.e., the test compound may be initially included in the reaction mixture, or added at a time subsequent to the addition of one of the
5 binding partners; controls are incubated without the test compound or with a placebo. The formation of any complexes between the binding partners is then detected. The formation of a complex in the control reaction, but not in the reaction mixture containing
10 the test compound indicates that the compound interferes with the interaction of the DP107 and DP178 peptides.

The assay for compounds that interfere with the interaction of the binding partners can be conducted
15 in a heterogeneous or homogeneous format. Heterogeneous assays involve anchoring one of the binding partners onto a solid phase and detecting complexes anchored on the solid phase at the end of the reaction. In homogeneous assays, the entire
20 reaction is carried out in a liquid phase. In either approach, the order of addition of reactants can be varied to obtain different information about the compounds being tested. For example, test compounds that interfere with the interaction between the
25 binding partners, e.g., by competition, can be identified by conducting the reaction in the presence of the test substance; i.e., by adding the test substance to the reaction mixture prior to or simultaneously with the binding partners. On the
30 other hand, test compounds that disrupt preformed complexes, e.g. compounds with higher binding constants that displace one of the binding partners from the complex, can be tested by adding the test compound to the reaction mixture after complexes have
35

been formed. The various formats are described briefly below.

5 In a heterogeneous assay system, one binding partner, e.g., either the DP107 or DP178 peptide, is anchored onto a solid surface, and its binding partner, which is not anchored, is labeled, either directly or indirectly. In practice, microtiter plates are conveniently utilized. The anchored species may be immobilized by non-covalent or covalent attachments. Non-covalent attachment may be
10 accomplished simply by coating the solid surface with a solution of the protein and drying. Alternatively, an immobilized antibody specific for the protein may be used to anchor the protein to the solid surface. The surfaces may be prepared in advance and stored.

15 In order to conduct the assay, the binding partner of the immobilized species is added to the coated surface with or without the test compound. After the reaction is complete, unreacted components are removed (e.g., by washing) and any complexes
20 formed will remain immobilized on the solid surface. The detection of complexes anchored on the solid surface can be accomplished in a number of ways. Where the binding partner was pre-labeled, the detection of label immobilized on the surface
25 indicates that complexes were formed. Where the binding partner is not pre-labeled, an indirect label can be used to detect complexes anchored on the surface; e.g., using a labeled antibody specific for the binding partner (the antibody, in turn, may be
30 directly labeled or indirectly labeled with a labeled anti-Ig antibody). Depending upon the order of addition of reaction components, test compounds which inhibit complex formation or which disrupt preformed complexes can be detected.

35

Alternatively, the reaction can be conducted in a liquid phase in the presence or absence of the test compound, the reaction products separated from unreacted components, and complexes detected; e.g., using an immobilized antibody specific for one binding partner to anchor any complexes formed in solution, and a labeled antibody specific for the other binding partner to detect anchored complexes. Again, depending upon the order of addition of reactants to the liquid phase, test compounds which inhibit complex or which disrupt preformed complexes can be identified.

In an alternate embodiment of the invention, a homogeneous assay can be used. In this approach, a preformed complex of the DP107 and DP178 peptides is prepared in which one of the binding partners is labeled, but the signal generated by the label is quenched due to complex formation (see, e.g., U.S. Patent No. 4,109,496 by Rubenstein which utilizes this approach for immunoassays). The addition of a test substance that competes with and displaces one of the binding partners from the preformed complex will result in the generation of a signal above background. In this way, test substances which disrupt DP-107/DP-178 protein-protein interaction can be identified.

In an alternative screening assay, test compounds may be assayed for their ability to disrupt a DP178/DP107 interaction, as measured immunometrically using an antibody specifically reactive to a DP107/DP178 complex (i.e., an antibody that recognizes neither DP107 nor DP178 individually). Such an assay acts as a competition assay, and is based on techniques well known to those of skill in the art.

The above competition assay may be described, by way of example, and not by way of limitation, by using the DP178 and M41Δ178 peptides and by assaying test

compounds for the disruption of the complexes formed by these two peptides by immunometrically visualizing DP178/M41Δ178 complexes via the human recombinant Fab, Fab-d, as described, below, in the Example presented in Section 8. M41Δ178 is a maltose binding fusion
5 protein containing a gp41 region having its DP178 domain deleted, and is described, below, in the Example presented in Section 8.

Utilizing such an assay, M41Δ178 may be immobilized onto solid supports such as microtiter
10 wells. A series of dilutions of a test compound may then be added to each M41Δ178-containing well in the presence of a constant concentration of DP-178 peptide. After incubation, at, for example, room temperature for one hour, unbound DP-178 and test
15 compound are removed from the wells and wells are then incubated with the DP178/M41Δ178-specific Fab-d antibody. After incubation and washing, unbound Fab-d is removed from the plates and bound Fab-d is quantitated. A no-inhibitor control should also be
20 conducted. Test compounds showing an ability to disrupt DP178/M41Δ178 complex formation are identified by their concentration-dependent decrease in the level of Fab-d binding.

A variation of such an assay may be utilized to
25 perform a rapid, high-throughput binding assay which is capable of directly measuring DP178 binding to M41Δ178 for the determination of binding constants of the ligand or inhibitory constants for competitors of DP178 binding.

Such an assay takes advantage of accepted
30 radioligand and receptor binding principles. (See, for example, Yamamura, H.I. et al., 1985, "Neurotransmitter Receptor Binding", 2nd ed., Raven Press, NY.) As above, M41Δ178 is immobilized onto a
35 solid support such as a microtiter well. DP178

binding to M41Δ178 is then quantitated by measuring the fraction of DP178 that is bound as ¹²⁵I-DP178 and calculating the total amount bound using a value for specific activity (dpm/μg peptide) determined for each labeled DP178 preparation. Specific binding to
5 M41Δ178 is defined as the difference of the binding of the labeled DP178 preparation in the microtiter wells (totals) and the binding in identical wells containing, in addition, excess unlabeled DP178 (nonspecifics).
10

C L V / C 5.5 PHARMACEUTICAL FORMULATIONS, DOSAGES AND MODES OF ADMINISTRATION

The peptides of the invention may be administered using techniques well known to those in the art.
15 Preferably, agents are formulated and administered systemically. Techniques for formulation and administration may be found in "Remington's Pharmaceutical Sciences", 18th ed., 1990, Mack Publishing Co., Easton, PA. Suitable routes may
20 include oral, rectal, transmucosal, or intestinal administration; parenteral delivery, including intramuscular, subcutaneous, intramedullary injections, as well as, intrathecal, direct intraventricular, intravenous, intraperitoneal,
25 intranasal, or intraocular injections, just to name a few. For injection, the agents of the invention may be formulated in aqueous solutions, preferably in physiologically compatible buffers such as Hanks' solution, Ringer's solution, or physiological saline
30 buffer. For such transmucosal administration, penetrants appropriate to the barrier to be permeated are used in the formulation. Such penetrants are generally known in the art.

In instances wherein intracellular administration
35 of the peptides of the invention or other inhibitory

agents is preferred, techniques well known to those of ordinary skill in the art may be utilized. For example, such agents may be encapsulated into liposomes, then administered as described above. Liposomes are spherical lipid bilayers with aqueous interiors. All molecules present in an aqueous solution at the time of liposome formation are incorporated into the aqueous interior. The liposomal contents are both protected from the external microenvironment and, because liposomes fuse with cell membranes, are effectively delivered into the cell cytoplasm. Additionally, due to their hydrophobicity, when small molecules are to be administered, direct intracellular administration may be achieved.

Nucleotide sequences encoding the peptides of the invention which are to be intracellularly administered may be expressed in cells of interest, using techniques well known to those of skill in the art. For example, expression vectors derived from viruses such as retroviruses, vaccinia viruses, adeno-associated viruses, herpes viruses, or bovine papilloma viruses, may be used for delivery and expression of such nucleotide sequences into the targeted cell population. Methods for the construction of such vectors and expression constructs are well known. See, for example, Sambrook et al., 1989, Molecular Cloning, A Laboratory Manual, Cold Spring Harbor Press, Cold Spring Harbor NY, and Ausubel et al., 1989, Current Protocols in Molecular Biology, Greene Publishing Associates and Wiley Interscience, NY.

With respect to HIV, peptides of the invention, particularly DP107 and DP178, may be used as therapeutics in the treatment of AIDS. In addition, the peptides may be used as prophylactic measures in previously uninfected individuals after acute exposure

to an HIV virus. Examples of such prophylactic use of the peptides may include, but are not limited to, prevention of virus transmission from mother to infant and other settings where the likelihood of HIV transmission exists, such as, for example, accidents
5 in health care settings wherein workers are exposed to HIV-containing blood products. The successful use of such treatments do not rely upon the generation of a host immune response directed against such peptides.

Effective dosages of the peptides of the
10 invention to be administered may be determined through procedures well known to those in the art which address such parameters as biological half-life, bioavailability, and toxicity. Given the data presented below in Section 6, DP178, for example, may
15 prove efficacious in vivo at doses required to achieve circulating levels of about 1 to about 10 ng per ml of peptide.

A therapeutically effective dose refers to that amount of the compound sufficient to result in
20 amelioration of symptoms or a prolongation of survival in a patient. Toxicity and therapeutic efficacy of such compounds can be determined by standard pharmaceutical procedures in cell cultures or experimental animals, e.g., for determining the LD₅₀
25 (the dose lethal to 50% of the population) and the ED₅₀ (the dose therapeutically effective in 50% of the population). The dose ratio between toxic and therapeutic effects is the therapeutic index and it can be expressed as the ratio LD₅₀/ED₅₀. Compounds
30 which exhibit large therapeutic indices are preferred. The data obtained from these cell culture assays and animal studies can be used in formulating a range of dosage for use in humans. The dosage of such compounds lies preferably within a range of
35 circulating concentrations that include the ED₅₀ with

little or no toxicity. The dosage may vary within this range depending upon the dosage form employed and the route of administration utilized. For any compound used in the method of the invention, the therapeutically effective dose can be estimated
5 initially from cell culture assays. A dose may be formulated in animal models to achieve a circulating plasma concentration range that includes the IC_{50} (e.g., the concentration of the test compound which achieves a half-maximal inhibition of the fusogenic
10 event, such as a half-maximal inhibition of viral infection relative to the amount of the event in the absence of the test compound) as determined in cell culture. Such information can be used to more accurately determine useful doses in humans. Levels
15 in plasma may be measured, for example, by high performance liquid chromatography (HPLC).

The peptides of the invention may, further, serve the role of a prophylactic vaccine, wherein the host raises antibodies against the peptides of the
20 invention, which then serve to neutralize HIV viruses by, for example, inhibiting further HIV infection.

Administration of the peptides of the invention as a prophylactic vaccine, therefore, would comprise administering to a host a concentration of peptides
25 effective in raising an immune response which is sufficient to neutralize HIV, by, for example, inhibiting HIV ability to infect cells. The exact concentration will depend upon the specific peptide to be administered, but may be determined by using
30 standard techniques for assaying the development of an immune response which are well known to those of ordinary skill in the art. The peptides to be used as vaccines are usually administered intramuscularly.

The peptides may be formulated with a suitable
35 adjuvant in order to enhance the immunological

response. Such adjuvants may include, but are not limited to mineral gels such as aluminum hydroxide; surface active substances such as lysolecithin, pluronic polyols, polyanions; other peptides; oil emulsions; and potentially useful human adjuvants such as BCG and Corynebacterium parvum. Many methods may be used to introduce the vaccine formulations described here. These methods include but are not limited to oral, intradermal, intramuscular, intraperitoneal, intravenous, subcutaneous, and intranasal routes.

Alternatively, an effective concentration of polyclonal or monoclonal antibodies raised against the peptides of the invention may be administered to a host so that no uninfected cells become infected by HIV. The exact concentration of such antibodies will vary according to each specific antibody preparation, but may be determined using standard techniques well known to those of ordinary skill in the art. Administration of the antibodies may be accomplished using a variety of techniques, including, but not limited to those described in this section.

For all such treatments described above, the exact formulation, route of administration and dosage can be chosen by the individual physician in view of the patient's condition. (See e.g. Fingl et al., 1975, in "The Pharmacological Basis of Therapeutics", Ch. 1 p1).

It should be noted that the attending physician would know how to and when to terminate, interrupt, or adjust administration due to toxicity, or to organ dysfunctions. Conversely, the attending physician would also know to adjust treatment to higher levels if the clinical response were not adequate (precluding toxicity). The magnitude of an administered dose in the management of the oncogenic disorder of interest

will vary with the severity of the condition to be treated and the route of administration. The dose and perhaps dose frequency, will also vary according to the age, body weight, and response of the individual patient. A program comparable to that discussed above
5 may be used in veterinary medicine.

Use of pharmaceutically acceptable carriers to formulate the compounds herein disclosed for the practice of the invention into dosages suitable for systemic administration is within the scope of the
10 invention. With proper choice of carrier and suitable manufacturing practice, the compositions of the present invention, in particular, those formulated as solutions, may be administered parenterally, such as by intravenous injection. The compounds can be
15 formulated readily using pharmaceutically acceptable carriers well known in the art into dosages suitable for oral administration. Such carriers enable the compounds of the invention to be formulated as tablets, pills, capsules, liquids, gels, syrups,
20 slurries, suspensions and the like, for oral ingestion by a patient to be treated.

Pharmaceutical compositions suitable for use in the present invention include compositions wherein the active ingredients are contained in an effective
25 amount to achieve its intended purpose. Determination of the effective amounts is well within the capability of those skilled in the art, especially in light of the detailed disclosure provided herein.

In addition to the active ingredients, these
30 pharmaceutical compositions may contain suitable pharmaceutically acceptable carriers comprising excipients and auxiliaries which facilitate processing of the active compounds into preparations which can be used pharmaceutically. The preparations formulated
35

for oral administration may be in the form of tablets, dragees, capsules, or solutions.

The pharmaceutical compositions of the present invention may be manufactured in a manner that is itself known, e.g., by means of conventional mixing, dissolving, granulating, dragee-making, levigating, emulsifying, encapsulating, entrapping or lyophilizing processes.

Pharmaceutical formulations for parenteral administration include aqueous solutions of the active compounds in water-soluble form. Additionally, suspensions of the active compounds may be prepared as appropriate oily injection suspensions. Suitable lipophilic solvents or vehicles include fatty oils such as sesame oil, or synthetic fatty acid esters, such as ethyl oleate or triglycerides, or liposomes. Aqueous injection suspensions may contain substances which increase the viscosity of the suspension, such as sodium carboxymethyl cellulose, sorbitol, or dextran. Optionally, the suspension may also contain suitable stabilizers or agents which increase the solubility of the compounds to allow for the preparation of highly concentrated solutions.

Pharmaceutical preparations for oral use can be obtained by combining the active compounds with solid excipient, optionally grinding a resulting mixture, and processing the mixture of granules, after adding suitable auxiliaries, if desired, to obtain tablets or dragee cores. Suitable excipients are, in particular, fillers such as sugars, including lactose, sucrose, mannitol, or sorbitol; cellulose preparations such as, for example, maize starch, wheat starch, rice starch, potato starch, gelatin, gum tragacanth, methyl cellulose, hydroxypropylmethyl-cellulose, sodium carboxymethylcellulose, and/or polyvinylpyrrolidone (PVP). If desired, disintegrating agents may be

added, such as the cross-linked polyvinyl pyrrolidone, agar, or alginic acid or a salt thereof such as sodium alginate.

Dragee cores are provided with suitable coatings. For this purpose, concentrated sugar solutions may be
5 used, which may optionally contain gum arabic, talc, polyvinyl pyrrolidone, carbopol gel, polyethylene glycol, and/or titanium dioxide, lacquer solutions, and suitable organic solvents or solvent mixtures. Dyestuffs or pigments may be added to the tablets or
10 dragee coatings for identification or to characterize different combinations of active compound doses.

Pharmaceutical preparations which can be used orally include push-fit capsules made of gelatin, as well as soft, sealed capsules made of gelatin and a
15 plasticizer, such as glycerol or sorbitol. The push-fit capsules can contain the active ingredients in admixture with filler such as lactose, binders such as starches, and/or lubricants such as talc or magnesium stearate and, optionally, stabilizers. In
20 soft capsules, the active compounds may be dissolved or suspended in suitable liquids, such as fatty oils, liquid paraffin, or liquid polyethylene glycols. In addition, stabilizers may be added.

²⁵ CL 01/2 6. EXAMPLE: DP178 (SEQ ID:1) IS A POTENT INHIBITOR OF HIV-1 INFECTION

In this example, DP178 (SEQ ID:1) is shown to be a potent inhibitor of HIV-1 mediated CD-4⁺ cell-cell fusion and infection by cell free virus. In the
30 fusion assay, this peptide completely blocks virus induced syncytia formation at concentrations of from 1-10 ng/ml. In the infectivity assay the inhibitory concentration is somewhat higher, blocking infection at 90ng/ml. It is further shown that DP178 (SEQ ID:1)
35 shows that the antiviral activity of DP178 (SEQ ID:1)

is highly specific for HIV-1. Additionally, a synthetic peptide, DP-185 (SEQ ID:3), representing a HIV-1-derived DP178 homolog is also found to block HIV-1-mediated syncytia formation.

5 CL V/L 6.1. MATERIALS AND METHODS

CL V/L 6.1.1. PEPTIDE SYNTHESIS

Peptides were synthesized using Fast Moc chemistry on an Applied Biosystems Model 431A peptide synthesizer. Generally, unless otherwise noted, the peptides contained amidated carboxy termini and acetylated amino termini. Amidated peptides were prepared using Rink resin (Advanced Chemtech) while peptides containing free carboxy termini were synthesized on Wang (p-alkoxy-benzyl-alcohol) resin (Bachem). First residues were double coupled to the appropriate resin and subsequent residues were single coupled. Each coupling step was followed by acetic anhydride capping. Peptides were cleaved from the resin by treatment with trifluoroacetic acid (TFA) (10ml), H₂O (0.5ml), thioanisole (0.5ml), ethanedithiol (0.25ml), and crystalline phenol (0.75g). Purification was carried out by reverse phase HPLC. Approximately 50mg samples of crude peptide were chromatographed on a Waters Delta Pak C18 column (19mm x 30cm, 15μ spherical) with a linear gradient; H₂O/acetonitrile 0.1% TFA. Lyophilized peptides were stored desiccated and peptide solutions were made in water at about 1mg/ml. Electrospray mass spectrometry yielded the following results: DP178 (SEQ ID:1):4491.87 (calculated 4491.94); DP-180 (SEQ ID:2):4491.45 (calculated 4491.94); DP-185 (SEQ ID:3):not done (calculated 4546.97).

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CL V/L.

6.1.2. VIRUS

The HIV-1_{LAI} virus was obtained from R. Gallo (Popovic, M. et al., 1984, Science 224:497-508) and propagated in CEM cells cultured in RPMI 1640
5 containing 10% fetal calf serum. Supernatant from the infected CEM cells was passed through a 0.2 μ m filter and the infectious titer estimated in a microinfectivity assay using the AA5 cell line to support virus replication. For this purpose, 25 μ l of
10 serial diluted virus was added to 75 μ l AA5 cells at a concentration of 2×10^5 /ml in a 96-well microtitre plate. Each virus dilution was tested in triplicate. Cells were cultured for eight days by addition of
15 fresh medium every other day. On day 8 post infection, supernatant samples were tested for virus replication as evidenced by reverse transcriptase activity released to the supernatant. The TCID₅₀ was calculated according to the Reed and Muench formula (Reed, L.J. et al., 1938, Am. J. Hyg. 27:493-497).
20 The titer of the HIV-1_{LAI} and HIV-1_{MN} stocks used for these studies, as measured on the AA5 cell line, was approximately 1.4×10^6 and 3.8×10^4 TCID₅₀/ml, respectively.

CL V/L

6.1.3. CELL FUSION ASSAY

25 Approximately 7×10^4 Molt cells were incubated with 1×10^4 CEM cells chronically infected with the HIV-1_{LAI} virus in 96-well plates (one-half area cluster plates; Costar, Cambridge, MA) in a final volume of
30 100 μ l culture medium as previously described (Matthews, T.J. et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5428). Peptide inhibitors were added in a volume of 10 μ l and the cell mixtures were incubated for 24 hr. at 37°C. At that time, multinucleated
35 giant cells were estimated by microscopic examination

at a 40x magnification which allowed visualization of the entire well in a single field.

CL U/L 6.1.4. CELL FREE VIRUS INFECTION ASSAY

5 Synthetic peptides were incubated at 37°C with
either 247 TCID₅₀ (for experiment depicted in FIG. 2),
or 62 TCID₅₀ (for experiment depicted in FIG.3) units
of HIV-1_{LAI} virus or 25 TCID₅₀ units of HIV-2_{NIH} and CEM
CD4⁺ cells at peptide concentrations of 0, 0.04, 0.4,
10 4.0, and 40µg/ml for 7 days. The resulting reverse
transcriptase (RT) activity in counts per minute was
determined using the assay described, below, in
Section 6.1.5. See, Reed, L.J. et al., 1938, Am. J.
Hyg. 27: 493-497 for an explanation of TCID₅₀
calculations.

15

CL U/L 6.1.5. REVERSE TRANSCRIPTASE ASSAY

The micro-reverse transcriptase (RT) assay was
adapted from Goff et al. (Goff, S. et al., 1981, J.
Virol. 38:239-248) and Willey et al. (Willey, R. et
20 al., 1988, J. Virol. 62:139-147). Supernatants from
virus/cell cultures are adjusted to 1% Triton-X100. A
10µl sample of supernatant was added to 50µl of RT
cocktail in a 96-well U-bottom microtitre plate and
the samples incubated at 37°C for 90 min. The RT
25 cocktail contained 75mM KCl, 2mM dithiothreitol, 5mM
MgCl₂, 5µg/ml poly A (Pharmacia, cat. No. 27-4110-01),
0.25 units/ml oligo dT (Pharmacia, cat. No. 27-7858-
01), 0.05% NP40, 50mM Tris-HCl, pH 7.8, 0.5µM non-
radioactive dTTP, and 10µCi/ml ³²P-dTTP (Amersham, cat.
30 No. PB.10167).

After the incubation period, 40µl of reaction
mixture was applied to a Schleicher and Schuell (S+S)
NA45 membrane (or DE81 paper) saturated in 2 x SSC
buffer (0.3M NaCl and 0.003M sodium citrate) held in a
35 S+S Minifold over one sheet of GB003 (S+S) filter

paper, with partial vacuum applied. Each well of the minifold was washed four times with 200 μ l 2xSSC, under full vacuum. The membrane was removed from the minifold and washed 2 more times in a pyrex dish with an excess of 2xSSC. Finally, the membrane was drained
5 on absorbent paper, placed on Whatman #3 paper, covered with Saran wrap, and exposed to film overnight at -70°C.

CL/UC

6.2. RESULTS

10 CL/UC 6.2.1. PEPTIDE INHIBITION OF INFECTED CELL-INDUCED SYNCYTIA FORMATION

The initial screen for antiviral activity assayed peptides' ability to block syncytium formation induced by overnight co-cultivation of uninfected Molt4 cells
15 with chronically HIV-1 infected CEM cells. The results of several such experiments are presented herein. In the first of these experiments, serial DP178 (SEQ ID:1) peptide concentrations between 10 μ g/ml and 12.5ng/ml were tested for blockade of the
20 cell fusion process. For these experiments, CEM cells chronically infected with either HIV-1_{LAI}, HIV-1_{MN}, HIV-1_{RF}, or HIV-1_{SF2} virus were cocultivated overnight with uninfected Molt 4 cells. The results (FIG. 4) show that DP178 (SEQ ID:1) afforded complete protection
25 against each of the HIV-1 isolates down to the lowest concentration of DP178 (SEQ ID:1) used. For HIV_{LAI} inhibition, the lowest concentration tested was 12.5ng/ml; for all other HIV-1 viruses, the lowest concentration of DP178 (SEQ ID:1) used in this study
30 was 100ng/ml. A second peptide, DP-180 (SEQ ID:2), containing the same amino acid residues as DP178 (SEQ ID:1) but arranged in a random order exhibited no evidence of anti-fusogenic activity even at the high concentration of 40 μ g/ml (FIG. 4). These observations
35 indicate that the inhibitory effect of DP178 (SEQ

ID:1) is primary sequence-specific and not related to non-specific peptide/protein interactions. The actual endpoint (i.e., the lowest effective inhibitory concentration) of DP178 inhibitory action is within the range of 1-10 ng/ml.

5 The next series of experiments involved the preparation and testing of a DP178 (SEQ ID:1) homolog for its ability to inhibit HIV-1-induced syncytia formation. As shown in FIG. 1, the sequence of DP-185 (SEQ ID:3) is slightly different from DP178 (SEQ ID:1) in that its primary sequence is taken from the HIV-1_{SP2} isolate and contains several amino acid differences relative to DP178 (SEQ ID:1) near the N terminus. As shown in FIG. 4, DP-185 (SEQ ID:3), exhibits inhibitory activity even at 312.5ng/ml, the lowest concentration tested.

15 The next series of experiments involved a comparison of DP178 (SEQ ID:1) HIV-1 and HIV-2 inhibitory activity. As shown in FIG. 5, DP178 (SEQ ID:1) blocked HIV-1-mediated syncytia formation at peptide concentrations below 1ng/ml. DP178 (SEQ ID:1) failed, however, to block HIV-2 mediated syncytia formation at concentrations as high as 10µg/ml. This striking 4 log selectivity of DP178 (SEQ ID:1) as an inhibitor of HIV-1-mediated cell fusion demonstrates an unexpected HIV-1 specificity in the action of DP178 (SEQ ID:1). DP178 (SEQ ID:1) inhibition of HIV-1-mediated cell fusion, but the peptide's inability to inhibit HIV-2 medicated cell fusion in the same cell type at the concentrations tested provides further evidence for the high degree of selectivity associated with the antiviral action of DP178 (SEQ ID:1).

35

CL V/L. 6.2.2. PEPTIDE INHIBITION OF INFECTION BY
CELL-FREE VIRUS

DP178 (SEQ ID:1) was next tested for its ability to block CD-4⁺ CEM cell infection by cell free HIV-1 virus. The results, shown in FIG. 2, are from an experiment in which DP178 (SEQ ID:1) was assayed for its ability to block infection of CEM cells by an HIV-1_{LAI} isolate. Included in the experiment were three control peptides, DP-116 (SEQ ID:9), DP-125 (SEQ ID:8), and DP-118 (SEQ ID:10). DP-116 (SEQ ID:9) represents a peptide previously shown to be inactive using this assay, and DP-125 (SEQ ID:8; Wild, C. et al., 1992, Proc. Natl. Acad. Sci. USA 89:10,537) and DP-118 (SEQ ID:10) are peptides which have previously been shown to be active in this assay. Each concentration (0, 0.04, 0.4, 4, and 40 µg/ml) of peptide was incubated with 247 TCID₅₀ units of HIV-1_{LAI} virus and CEM cells. After 7 days of culture, cell-free supernatant was tested for the presence of RT activity as a measure of successful infection. The results, shown in FIG. 2, demonstrate that DP178 (SEQ ID:1) inhibited the de novo infection process mediated by the HIV-1 viral isolate at concentrations as low as 90ng/ml (IC₅₀=90ng/ml). In contrast, the two positive control peptides, DP-125 (SEQ ID:8) and DP-118 (SEQ ID:10), had over 60-fold higher IC₅₀ concentrations of approximately 5 µg/ml.

In a separate experiment, the HIV-1 and HIV-2 inhibitory action of DP178 (SEQ ID:1) was tested with CEM cells and either HIV-1_{LAI} or HIV-2_{NIHZ}. 62 TCID₅₀ HIV-1_{LAI} or 25 GCID₅₀ HIV-2_{NIHZ} were used in these experiments, and were incubated for 7 days. As may be seen in FIG. 3, DP178 (SEQ ID:1) inhibited HIV-1 infection with an IC₅₀ of about 31ng/ml. In contrast, DP178 (SEQ ID:1) exhibited a much higher IC₅₀ for HIV-2_{NIHZ}, thus making DP178 (SEQ ID:1) two logs more potent

as a HIV-1 inhibitor than a HIV-2 inhibitor. This finding is consistent with the results of the fusion inhibition assays described, above, in Section 6.2.1, and further supports a significant level of selectivity (i.e., for HIV-1 over HIV-2).

5

CL V/L 7. EXAMPLE: THE HIV-1 INHIBITOR,
DP178 (SEQ ID:1) IS NON-CYTOTOXIC

In this Example, the 36 amino acid synthetic peptide inhibitor DP178 (SEQ ID:1) is shown to be non-
10 cytotoxic to cells in culture, even at the highest peptide concentrations (40µg/ml) tested.

CL V/L 7.1. MATERIALS AND METHODS

Cell proliferation and toxicity assay:

15 Approximately 3.8×10^5 CEM cells for each peptide concentration were incubated for 3 days at 37°C in T25 flasks. Peptides tested were DP178 (SEQ ID:1) and DP-116 (SEQ ID:9), as described in FIG. 1. Peptides were synthesized as described, above, in Section 6.1. The
20 concentrations of each peptide used were 0, 2.5, 10, and 40µg/ml. Cell counts were taken at incubation times of 0, 24, 48, and 72 hours.

CL

7.2. RESULTS

25 Whether the potent HIV-1 inhibitor DP178 (SEQ ID:1) exhibited any cytotoxic effects was assessed by assaying the peptide's effects on the proliferation and viability of cells in culture. CEM cells were incubated in the presence of varying concentrations of
30 DP178 (SEQ ID:1), and DP-116 (SEQ ID:9), a peptide previously shown to be ineffective as a HIV inhibitor (Wild, C. et al., 1992, Proc. Natl. Acad. Sci. USA 89:10,537-10,541). Additionally, cells were incubated in the absence of either peptide.

35

The results of the cytotoxicity study demonstrate that DP178 (SEQ ID:1) exhibits no cytotoxic effects on cells in culture. As can be seen, below, in Table XXIV, even the proliferation and viability characteristics of cells cultured for 3 days in the presence of the highest concentration of DP178 (SEQ ID:1) tested (40µg/ml) do not significantly differ from the DP-116 (SEQ ID:9) or the no-peptide controls. The cell proliferation data is also represented in graphic form in FIG. 6. As was demonstrated in the Working Example presented above in Section 6, DP178 (SEQ ID:1) completely inhibits HIV-1 mediated syncytia formation at peptide concentrations between 1 and 10ng/ml, and completely inhibits cell-free viral infection at concentrations of at least 90ng/ml. Thus, this study demonstrates that even at peptide concentrations greater than 3 log higher than the HIV inhibitory dose, DP178 (SEQ ID:1) exhibits no cytotoxic effects.

TABLE XXIV

T₃₆₆₀

5	<u>Peptide</u>	<u>Peptide Concentration μg/ml</u>	<u>% Viability at time (hours)</u>			
			<u>0</u>	<u>24</u>	<u>48</u>	<u>72</u>
	DP178 (SEQ ID:1)	40	98	97	95	97
10		10	98	97	98	98
		2.5	98	93	96	96
	DP116 (SEQ ID:9)	40	98	95	98	97
15		10	98	95	93	98
		2.5	98	96	98	99
	No Peptide	0	98	97	99	98
20	<hr/>					

CLV/L 8. EXAMPLE: THE INTERACTION OF DP178 AND DP107

P Soluble recombinant forms of gp41 used in the
 25 example described below provide evidence that the
 DP178 peptide associates with a distal site on gp41
 whose interactive structure is influenced by the DP107
 leucine zipper motif. A single mutation disrupting
 the coiled-coil structure of the leucine zipper domain
 30 transformed the soluble recombinant gp41 protein from
 an inactive to an active inhibitor of HIV-1 fusion.
 This transformation may result from liberation of the
 potent DP178 domain from a molecular clasp with the
 leucine zipper, DP107, determinant. The results also
 35 indicate that the anti-HIV activity of various gp41
 derivatives (peptides and recombinant proteins) may be

due to their ability to form complexes with viral gp41 and interfere with its fusogenic process.

CLV/C

8.1. MATERIALS AND METHODS

5 CLV/L

8.1.1. CONSTRUCTION OF FUSION PROTEINS AND GP41 MUTANTS

Construction of fusion proteins and mutants shown in FIG. 7 was accomplished as follows: the DNA sequence corresponding to the extracellular domain of gp41 (540-686) was cloned into the Xmn I site of the expression vector pMal-p2 (New England Biolab) to give M41. The gp41 sequence was amplified from pgtat (Malim et al., 1988, Nature 355: 181-183) by using polymerase chain reaction (PCR) with upstream primer 5'-ATGACGCTGACGGTACAGGCC-3' (primer A) and downstream primer 5'-TGACTAAGCTTAATACCACAGCCAATTTGTTAT-3' (primer B). M41-P was constructed by using the T7-Gen in vitro mutagenesis kit from United States Biochemicals (USB) following the supplier's instructions. The mutagenic primer (5'-GGAGCTGCTTGGGGCCCCAGAC-3') introduces an Ile to Pro mutation in M41 at position 578. M41Δ107, from which the DP-107 region has been deleted, was made using a deletion mutagenic primer 5'-CCAAATCCCCAGGAGCTGCTCGAGCTGCACTATACCAGAC-3' following the USB T7-Gen mutagenesis protocol. M41Δ178, from which the DP-178 region has been deleted, was made by cloning the DNA fragment corresponding to gp41 amino acids 540-642 into the Xmn I site of pMal-p2. Primer A and 5'-ATAGCTTCTAGATTAATTGTTAATTTCTCTGTCCC-3' were used in the PCR with the template pgtat to generate the inserted DNA fragments. M41-P was used as the template with primer A and D in PCR to generate M41-PA178. All inserted sequences and mutated residues

were checked by restriction enzyme analysis and confirmed by DNA sequencing.

CL V/L 8.1.2. PURIFICATION AND CHARACTERIZATION OF FUSION PROTEINS

5 The fusion proteins were purified according to the protocol described in the manufacturer's brochure of protein fusion and purification systems from New England Biolabs (NEB). Fusion proteins (10 ng) were analyzed by electrophoresis on 8% SDS polyacrylamide
10 gels. Western blotting analysis was performed as described by Sambrook et al., 1989, Molecular Cloning: A Laboratory Manual, 2d Ed, Cold Spring Harbor Laboratory Press, Cold Spring Harbor, NY, Ch. 18, pp. 64-75. An HIV-1 positive serum diluted 1000-fold,
15 or a human Fab derived from repertoire cloning was used to react with the fusion proteins. The second antibody was HRP-conjugated goat antihuman Fab. An ECL Western blotting detection system (Amersham) was used to detect the bound antibody. A detailed
20 protocol for this detection system was provided by the manufacturer. Rainbow molecular weight markers (Amersham) were used to estimate the size of fusion proteins.

CL V/L 25 8.1.3. CELL FUSION ASSAYS FOR ANTI-HIV ACTIVITY

P Cell fusion assays were performed as previously described (Matthews et al., 1987, Proc. Natl. Acad. Sci. USA 84: 5424-5481). CEM cells (7×10^4) were incubated with HIV-1_{IIIb} chronically infected CEM cells
30 (10^4) in 96-well flat-bottomed half-area plates (Costar) in 100 μ l culture medium. Peptide and fusion proteins at various concentrations in 10 μ l culture medium were incubated with the cell mixtures at 37°C for 24 hours. Multinucleated syncytia were estimated
35 with microscopic examination. Both M41 and M41-P did

not show cytotoxicity at the concentrations tested and shown in FIG. 8.

Inhibition of HIV-1 induced cell-cell fusion activity was carried out in the presence of 10 nM DP178 and various concentrations of M41Δ178 or M41-PA178 as indicated in FIG. 9. There was no observable syncytia in the presence of 10 nM DP178. No peptide or fusion protein was added in the control samples.

10 *CLV/L* 8.1.4. ELISA ANALYSIS OF DP178 BINDING TO THE LEUCINE ZIPPER MOTIF OF GP41

15 *p* The amino acid sequence of DP178 used is: YTSLIHSLIEESQNQQEKNEQELLELDKWASLWNWF. For enzyme linked immunoassay (ELISA), M41Δ178 or M41-PA178 (5 μg/ml) in 0.1M NaHCO₃, pH 8.6, were coated on 96 wells Linbro ELISA plates (Flow Lab, Inc.) overnight. Each well was washed three times with distilled water then blocked with 3% bovine serum albumin (BSA) for 2 hours. After blocking, peptides with 0.5% BSA in TBST (40 mM Tris-HCl pH7.5, 150 mM NaCl, 0.05% Tween 20) were added to the ELISA plates and incubated at room temperature for 1 hour. After washing three times with TBST, Fab-d was added at a concentration of 10 ng/ml with 0.5% BSA in TBST. The plates were washed three times with TBST after incubation at room temperature for 1 hour. Horse radish peroxidase (HRP) conjugated goat antihuman Fab antiserum at a 2000 fold dilution in TBST with 0.5% BSA was added to each well and incubated at room temperature for 45 minutes. The plates were then washed four times with TBST. The peroxidase substrate o-phenylene diamine (2.5 mg/ml) and 0.15% H₂O₂ were added to develop the color. The reaction was stopped with an equal volume of 4.5 N H₂SO₄ after incubation at room temperature for 10 minutes. The optical density of the stopped reaction mixture was measured with a micro plate reader

(Molecular Design) at 490 nm. Results are shown in FIG. 10.

CL V/C

8.2. RESULTS

5 CL V/L 8.2.1. THE EXPRESSION AND CHARACTERIZATION OF THE ECTODOMAIN OF gp41

As a step toward understanding the roles of the two helical regions in gp41 structure and function, the ectodomain of gp41 was expressed as a maltose binding fusion protein (M41) (FIG. 7). The fusogenic peptide sequence at the N-terminal of gp41 was omitted from this recombinant protein and its derivatives to improve solubility. The maltose binding protein facilitated purification of the fusion proteins under relatively mild, non-denaturing conditions. Because 15 the M41 soluble recombinant gp41 was not glycosylated, lacked several regions of the transmembrane protein (i.e., the fusion peptide, the membrane spanning, and the cytoplasmic domains), and was expressed in the absence of gp120, it was not expected to precisely 20 reflect the structure of native gp41 on HIV-1 virions. Nevertheless, purified M41 folded in a manner that preserved certain discontinuous epitopes as evidenced by reactivity with human monoclonal antibodies, 98-6, 126-6, and 50-69, previously shown to bind 25 conformational epitopes on native gp41 expressed in eukaryotic cells (Xu et al., 1991, J. Virol. 65: 4832-4838; Chen, 1994, J. Virol. 68:2002-2010). Thus, at least certain regions of native gp41 defined by these antibodies appear to be reproduced in the recombinant 30 fusion protein M41. Furthermore, M41 reacted with a human recombinant Fab (Fab-d) that recognizes a conformational epitope on gp41 and binds HIV-1 virions as well as HIV-1 infected cells but not uninfected cells as analyzed by FACS. Deletion of either helix 35 motif, i.e., DP107 or DP178, of the M41 fusion protein

eliminated reactivity with Fab-d. These results indicate that both helical regions, separated by 60 amino acids in the primary sequence, are required to maintain the Fab-d epitope.

5

CLV/L

8.2.2. ANTI-HIV ACTIVITY OF THE RECOMBINANT ECTODOMAIN OF GP41

The wild type M41 fusion protein was tested for anti-HIV-1 activity. As explained, supra, synthetic peptides corresponding to the leucine zipper (DP107) and the C-terminal putative helix (DP178) show potent anti-HIV activity. Despite inclusion of both these regions, the recombinant M41 protein did not affect HIV-1 induced membrane fusion at concentrations as high as 50 μ M (Table XXV, below).

TABLE XXV

DISRUPTION OF THE LEUCINE ZIPPER OF
GP41 FREES THE ANTI-HIV MOTIF

20

	<u>DP107</u>	<u>DP178</u>	<u>M41</u>	<u>M41-P</u>	<u>M41-PA178</u>
Cell fusion (IC ₅₀)	1 μ M	1 nM	> 50 μ M	83 nM	> 50 μ M
Fab-D binding (K _D)	-	-	3.5x10 ⁻⁹	2.5x10 ⁻⁸	-
HIV infectiv- ity (IC ₅₀)	1 μ M	80 nM	> 16 μ M	66 nM	> 8 μ M

25

30

1 The affinity constants of Fab-d binding to the fusion proteins were determined using a protocol described by B. Friguet et al., 1985, J. Immunol. Method. 77:305-319.

+ L6

- = No detectable binding of Fab-d to the fusion proteins.

35

+ L6

Antiviral Infectivity Assays. 20 μ l of serially diluted virus stock was incubated for 60 minutes at ambient temperature with 20 μ l of the indicated

concentration of purified recombinant fusion protein in RPMI 1640 containing 10% fetal bovine serum and antibiotics in a 96-well microtiter plate. 20 μ l of CEM4 cells at 6×10^5 cells/ml were added to each well, and cultures were incubated at 37°C in a humidified CO₂ incubator. Cells were cultured for 9 days by the addition of fresh medium every 2 to 3 days. On days 5, 7, and 9 postinfection, supernatant samples were assayed for reverse transcriptase (RT) activity, as described below, to monitor viral replication. The 50% tissue culture infectious dose (TCID₅₀) was calculated for each condition according to the formula of Reed & Muench, 1937, Am. J. Hyg. 27:493-497. RT activity was determined by a modification of the published methods of Goff et al., 1981, J. Virol. 38:239-248 and Willey et al., 1988, J. Virol. 62:139-147 as described in Chen et al., 1993, AIDS Res. Human Retroviruses 9:1079-1086.

10

P Surprisingly, a single amino acid substitution, proline in place of isoleucine in the middle of the leucine zipper motif, yielded a fusion protein (M41-P) which did exhibit antiviral activity (Table XXV and Fig. 8). As seen in Table XXV, M41-P blocked syncytia formation by 90% at approximately 85 nM and neutralized HIV-1_{IIIIB} infection by 90% at approximately 70 nM concentrations. The anti-HIV-1 activity of M41-P appeared to be mediated by the C-terminal helical sequence since deletion of that region from M41-P yielded an inactive fusion protein, M41- Δ 178 (Table XXV). This interpretation was reinforced by experiments demonstrating that a truncated fusion protein lacking the DP178 sequence, M41 Δ 178, abrogated the potent anti-fusion activity of the DP178 peptide in a concentration-dependent manner (FIG. 9). The same truncated fusion protein containing the proline mutation disrupting the leucine zipper, M41- Δ 178, was not active in similar competition experiments (FIG. 9). The results indicate that the DP178 peptide associates with a second site on gp41 whose interactive structure is dependent on a wild type leucine zipper sequence. A similar interaction may occur within the wild type fusion protein, M41, and act to form an intramolecular clasp which sequesters

the DP178 region, making it unavailable for anti-viral activity.

A specific association between these two domains is also indicated by other human monoclonal Fab-d studies. For example, Fab-d failed to bind either the
5 DP178 peptide or the fusion protein M41Δ178, but its epitope was reconstituted by simply mixing these two reagents together (FIG. 10). Again, the proline mutation in the leucine zipper domain of the fusion
10 protein, M41-PA178, failed to reconstitute the epitope in similar mixing experiments.

CL V/L 9. EXAMPLE: METHOD FOR COMPUTER-ASSISTED
IDENTIFICATION OF DP107-LIKE
AND DP178-LIKE SEQUENCES

15 P A number of known coiled-coil sequences have been well described in the literature and contain heptad repeat positioning for each amino acid. Coiled-coil nomenclature labels each of seven amino acids of a heptad repeat A through G, with amino acids A and D
20 tending to be hydrophobic positions. Amino acids E and G tend to be charged. These four positions (A, D, E, and G) form the amphipathic backbone structure of a monomeric alpha-helix. The backbones of two or more amphipathic helices interact with each other to form
25 di-, tri-, tetrameric, etc., coiled-coil structures. In order to begin to design computer search motifs, a series of well characterized coiled coils were chosen including yeast transcription factor GCN4, Influenza Virus hemagglutinin loop 36, and human proto-oncogenes
30 c-Myc, c-Fos, and c-Jun. For each peptide sequence, a strict homology for the A and D positions, and a list of the amino acids which could be excluded for the B, C, E, F, and G positions (because they are not observed in these positions) was determined. Motifs
35 were tailored to the DP107 and DP178 sequences by

deducing the most likely possibilities for heptad positioning of the amino acids of HIV-1 Bru DP-107, which is known to have coiled-coil structure, and HIV-1 Bru DP178, which is still structurally undefined. The analysis of each of the sequences is contained in FIG. 12. For example, the motif for GCN4 was designed as follows:

1. The only amino acids (using standard single letter amino acid codes) found in the A or D positions of GCN4 were [LMNV].
2. All amino acids were found at B, C, E, F, and G positions except {CFGIMPTW}.
3. The PESEARCH motif would, therefore, be written as follows: PS .

ti
 15 $\left[\begin{array}{l} [LMNV]-\{CFGIMPTW\}(2)-[LMNV]-\{CFGIMPTW\}(3)- \\ [LMNV]-\{CFGIMPTW\}(2)-[LMNV]-\{CFGIMPTW\}(3)- \\ [LMNV]-\{CFGIMPTW\}(2)-[LMNV]-\{CFGIMPTW\}(3)- \\ [LMNV]-\{CFGIMPTW\}(2)-[LMNV]-\{CFGIMPTW\}(3) \end{array} \right] PS$

PS .
 20 Translating or reading the motif: "at the first A position either L, M, N, or V must occur; at positions B and C (the next two positions) accept everything except C, F, G, I, M, P, T, or W; at the D position either L, M, N, or V must occur; at positions E, F, and G (the next 3 positions) accept everything except C, F, G, I, M, P, T, or W." This statement is contained four times in a 28-mer motif and five times in a 35-mer motif. The basic motif key then would be: [LMNV]-{CFGIMPTW}. The motif keys for the remaining well described coiled-coil sequences are summarized in FIG. 12.

30 The motif design for DP107 and DP178 was slightly different than the 28-mer model sequences described above due to the fact that heptad repeat positions are not defined and the peptides are both longer than 28 residues. FIG. 13 illustrates several possible

sequence alignments for both DP107 and DP178 and also includes motif designs based on 28-mer, 35-mer, and full-length peptides. Notice that only slight differences occur in the motifs as the peptides are lengthened. Generally, lengthening the base peptide results in a less stringent motif. This is very useful in broadening the possibilities for identifying DP107-or DP-178-like primary amino acid sequences referred to in this document as "hits".

In addition to making highly specific motifs for each type peptide sequence to be searched, it is also possible to make "hybrid" motifs. These motifs are made by "crossing" two or more very stringent motifs to make a new search algorithm which will find not only both "parent" motif sequences but also any peptide sequences which have similarities to one, the other, or both "parents". For example, in FIG. 14 the "parent" sequence of GCN4 is crossed with each of the possible "parent" motifs of DP-107. Now the hybrid motif must contain all of the amino acids found in the A and D positions of both parents, and exclude all of the amino acids not found in either parent at the other positions. The resulting hybrid from crossing GCN4 or [LMNV]{CFGIMPTW} and DP107 (28-mer with the first L in the D position) or [ILQT]{CDFIMPST}, is [ILMNQTV]{CFIMPT}. Notice that now only two basic hybrid motifs exist which cover both framing possibilities, as well as all peptide lengths of the parent DP-107 molecule. FIG. 15 represents the "hybridizations" of GCN4 with DP-178. FIG. 16 represents the "hybridizations" of DP107 and DP178. It is important to keep in mind that the represented motifs, both parent and hybrid, are motif keys and not the depiction of the full-length motif needed to actually do the computer search.

Hybridizations can be performed on any combination of two or more motifs. FIG. 17 summarizes several three-motif hybridizations including GCN4, DP107 (both frames), and DP178 (also both frames). Notice that the resulting motifs are now becoming much more similar to each other. In fact, the first and third hybrid motifs are actually subsets of the second and fourth hybrid motifs respectively. This means that the first and third hybrid motifs are slightly more stringent than the second and fourth. It should also be noted that with only minor changes in these four motifs, or by hybridizing them, a single motif could be obtained which would find all of the sequences. However, it should be remembered that stringency is also reduced. Finally, the most broad-spectrum and least-stringent hybrid motif is described in FIG. 18 which summarizes the hybridization of GCN4, DP107 (both frames), DP178 (both frames), c-Fos, c-Jun, c-Myc, and Flu loop 36.

A special set of motifs was designed based on the fact that DP-178 is located only approximately ten amino acids upstream of the transmembrane spanning region of gp41 and just C-terminal to a proline which separates DP107 and DP178. It has been postulated that DP178 may be an amphipathic helix when membrane associated, and that the proline might aid in the initiation of the helix formation. The same arrangement was observed in Respiratory Syncytial Virus; however, the DP178-like region in this virus also had a leucine zipper just C-terminal to the proline. Therefore, N-terminal proline-leucine zipper motifs were designed to analyze whether any other viruses might contain this same pattern. The motifs are summarized in FIG. 19.

The PC/Gene protein database contains 5879 viral amino acid sequences (library file PVIRUSES; CD-ROM

release 11.0). Of these, 1092 are viral enveloped or glycoprotein sequences (library file PVIRUSE1). Tables V through XIV contain lists of protein sequence names and motif hit locations for all the motifs searched.

5

CL v/c 10. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107 AND DP178-LIKE SEQUENCES IN HUMAN IMMUNODEFICIENCY VIRUS

P FIG. 20 represents search results for HIV-1 BRU isolate gp41 (PC/Gene protein sequence PENV_HV1BR). Notice that the hybrid motif which crosses DP-107 and DP-178 (named 107x178x4; the same motif as found in FIG. 16 found three hits including amino acids 550-599, 636-688, and 796-823. These areas include DP-107 plus eight N-terminal and four C-terminal amino acids; DP178 plus seven N-terminal and ten C-terminal amino acids; and an area inside the transmembrane region (cytoplasmic). FIG. 20 also contains the results obtained from searching with the motif named ALLMOTI5, for which the key is found in FIG. 17 ({CDGHP}{CFP}x5). This motif also found three hits including DP107 (amino acids 510-599), DP178 (615-717), and a cytoplasmic region (772-841). These hits overlap the hits found by the motif 107x178x4 with considerable additional sequences on both the amino and carboxy termini. This is not surprising in that 107x178x4 is a subset of the ALLMOTI5 hybrid motif. Importantly, even though the stringency of ALLMOTI5 is considerably less than 107x178x4, it still selectively identifies the DP107 and DP178 regions of gp41 shown to contain sequences for inhibitory peptides of HIV-1. The results of these two motif searches are summarized in Table V under the PC/Gene protein sequence name PENV HV1BR. The proline-leucine zipper motifs also gave several hits in HIV-1 BRU including 503-525 which is

at the very C-terminus of gp120, just upstream of the cleavage site (P7LZIPC and P12LZIPC); and 735-768 in the cytoplasmic domain of gp41 (P23LZIPC). These results are found in Tables VIII, IX, and X under the same sequence name as mentioned above. Notice that
5 the only area of HIV-1 BRU which is predicted by the Lupas algorithm to contain a coiled-coil region, is from amino acids 635-670. This begins eight amino acids N-terminal to the start and ends eight amino acids N-terminal to the end of DP178. DP107, despite
10 the fact that it is a known coiled coil, is not predicted to contain a coiled-coil region using the Lupas method.

CLV/L
15 11. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP107-LIKE AND DP178-LIKE SEQUENCES IN HUMAN RESPIRATORY SYNCYTIAL VIRUS

FIG. 21 represents search results for Human Respiratory Syncytial Virus (RSV; Strain A2) fusion glycoprotein F1 (PC/Gene protein sequence name PVGLF_HRSVA). Motif 107x178x4 finds three hits including amino acids 152-202, 213-243, and 488-515. The arrangement of these hits is similar to what is found in HIV-1 except that the motif finds two regions with
20 similarities to DP-178, one just downstream of what would be called the DP107 region or amino acids 213-243, and one just upstream of the transmembrane region (also similar to DP178) or amino acids 488-515. Motif ALLMOTI5 also finds three areas including amino acids
25 116-202, 267-302, and 506-549. The proline-leucine zipper motifs also gave several hits including amino acids 205-221 and 265-287 (P1LZIPC 265-280, P12LZIPC), and 484-513 (P7LZIPC and P12LZIPC 484-506, P23LZIPC). Notice that the PLZIP motifs also identify regions
30 which share location similarities with DP-178 of HIV-1.
35

CL 4/4 12. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP107-LIKE AND DP178-LIKE SEQUENCES
IN SIMIAN IMMUNODEFICIENCY VIRUS

Motif hits for Simian immunodeficiency Virus gp41 (AGM3 isolate; PC/Gene protein sequence name
5 PENV_SIVAG) are shown in FIG. 22. Motif 107x178x4 finds three hits including amino acids 566-593, 597-624, and 703-730. The first two hits only have three amino acids between them and could probably be combined into one hit from 566-624 which would
10 represent a DP107-like hit. Amino acids 703 to 730 would then represent a DP178-like hit. ALLMOTI5 also finds three hits including amino acids 556-628 (DP107-like), 651-699 (DP178-like), and 808-852 which represents the transmembrane spanning region. SIV
15 also has one region from 655-692 with a high propensity to form a coiled coil as predicted by the Lupas algorithm. Both 107x178x4 and ALLMOTI5 motifs find the same region. SIV does not have any PLZIP motif hits in gp41.
20 The identification of DP178/DP107 analogs for a second SIV isolate (MM251) is demonstrated in the Example presented, below, in Section 19.

CL 4/4 13. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
25 DP107-LIKE AND DP178 LIKE SEQUENCES
IN CANINE DISTEMPER VIRUS

Canine Distemper Virus (strain Onderstepoort) fusion glycoprotein F1 (PC/Gene Protein sequence name PVGLF_CDVO) has regions similar to Human RSV which are
30 predicted to be DP107-like and DP178-like (FIG. 23). Motif 107x178x4 highlights one area just C-terminal to the fusion peptide at amino acids 252-293. Amino acids 252-286 are also predicted to be coiled coil using the Lupas algorithm. Almost 100 amino acids C-
35 terminal to the first region is a DP178-like area at residues 340-367. ALLMOTI5 highlights three areas of

interest including: amino acids 228-297, which completely overlaps both the Lupas prediction and the DP107-like 107x178x4 hit; residues 340-381, which overlaps the second 107x178x4 hit; and amino acids 568-602, which is DP178-like in that it is located just N-terminal to the transmembrane region. It also overlaps another region (residues 570-602) predicted by the Lupas method to have a high propensity to form a coiled coil. Several PLZIP motifs successfully identified areas of interest including P6 and P12LZIPC which highlight residues 336-357 and 336-361 respectively; P1 and P12LZIPC which find residues 398-414; and P12 and P23LZIPC which find residues 562-589 and 562-592 respectively.

CLV/L 15 14. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP107-LIKE AND DP178-LIKE SEQUENCES
IN NEWCASTLE DISEASE VIRUS

FIG. 24 shows the motif hits found in Newcastle Disease Virus (strain Australia-Victoria/32; PC Gene protein sequence name PVGLF_NDVA). Motif 107x178x4 finds two areas including a DP107-like hit at amino acids 151-178 and a DP178-like hit at residues 426-512. ALLMOTI5 finds three areas including residues 117-182, 231-272, and 426-512. The hits from 426-512 include a region which is predicted by the Lupas method to have a high coiled-coil propensity (460-503). The PLZIP motifs identify only one region of interest at amino acids 273-289 (P1 and 12LZIPC).

CLV/L 30 15. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION
OF DP107-LIKE AND DP178-LIKE
SEQUENCES IN HUMAN PARAINFLUENZA VIRUS

Both motifs 107x178x4 and ALLMOTI5 exhibit DP107-like hits in the same region, 115-182 and 117-182 respectively, of Human Parainfluenza Virus (strain NIH 47885; PC/Gene protein sequence name PVGLF_p13H4;

(FIG. 25). In addition, the two motifs have a DP178-like hit just slightly C-terminal at amino acids 207-241. Both motifs also have DP178-like hits nearer the transmembrane region including amino acids 457-497 and 462-512 respectively. Several PLZIP motif hits are also observed including 283-303 (P5LZIPC), 283-310 (P12LZIPC), 453-474 (P6LZIPC), and 453-481 (P23LZIPC). The Lupas algorithm predicts that amino acids 122-176 may have a propensity to form a coiled-coil.

CLV/L 10 16. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP107-LIKE AND DP178-LIKE SEQUENCES OF
INFLUENZA A VIRUS

FIG. 26 illustrates the Lupas prediction for a coiled coil in Influenza A Virus (strain A/Aichi/2/68) at residues 379-436, as well as the motif hits for 107x178x4 at amino acids 387-453, and for ALLMOTI5 at residues 380-456. Residues 383-471 (38-125 of HA2) were shown by Carr and Kim to be an extended coiled coil when under acidic pH (Carr and Kim, 1993, Cell 73: 823-832). The Lupas algorithm predicts a coiled-coil at residues 379-436. All three methods successfully predicted the region shown to actually have coiled-coil structure; however, ALLMOTI5 predicted the greatest portion of the 88 residue stretch.

CLV/L 17. EXAMPLE: POTENTIAL RESPIRATORY SYNCYTIAL VIRUS
DP178/DP107 ANALOGS: CD AND
ANTIVIRAL CHARACTERIZATION

In the Example presented herein, respiratory syncytial virus (RSV) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 11, above, were tested for anti-RSV activity. Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated

that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of these peptides exhibit a substantial helical character.

5 CLV/L 17.1 MATERIALS AND METHODS

p Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a
10 Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptides were synthesized according to the methods described, above, in Section 6.1. Peptide concentrations were determined from A₂₈₀ using Edlehoch's method (1967, Biochemistry 6:1948).

15 p Anti-RSV antiviral activity assays: The assay utilized herein tested the ability of the peptides to disrupt the ability of HEp2 cells acutely infected with RSV (i.e., cells which are infected with a multiplicity of infection of greater than 2) to fuse
20 and cause syncytial formation on a monolayer of uninfected an uninfected line of Hep-2 cells. The lower the observed level of fusion, the greater the antiviral activity of the peptide was determined to be.

25 p Uninfected confluent monolayers of Hep-2 cells were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes
30 at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 3%, antibiotics (penicillin/streptomycin; Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

35 p To prepare Hep2 cells for addition to uninfected cells, cultures of acutely infected Hep2 cells were

washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and resuspended in 3%
5 FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected Hep-2 cells.

The antiviral assay was conducted by, first, removing all media from the wells containing
10 uninfected Hep-2 cells, then adding peptides (at the dilutions described below) in 3% EMEM, and 100 acutely RSV-infected Hep2 cells per well. Wells were then incubated at 37°C for 48 hours.

After incubation, cells in control wells were
15 checked for fusion centers, media was removed from the wells, followed by addition, to each well, of either Crystal Violet stain or XTT. With respect to Crystal Violet, approximately 50µl 0.25% Crystal Violet stain in methanol were added to each well. The wells were
20 rinsed immediately, to remove excess stain, and were allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

With respect to XTT (2,3-bis[2-Methoxy-4-nitro-5-sulfophenyl]-2H-tetrazolium-5-carboxyanilide inner
25 salt), 50µl XTT (1mg/ml in RPMI buffered with 100mM HEPES, pH 7.2-7.4, plus 5% DMSO) were added to each well. The OD_{450/690} was measured (after blanking against growth medium without cells or reagents, and against reagents) according to standard procedures.

30 Peptides: The peptides characterized in the study presented herein were:

p + b 1) peptides T-142 to T-155 and T-575, as shown in FIG. 27A, and peptides T-22 to T-27, T-68, T-334 and T-371 to T-375 and T-575, as shown in FIG. 27B;

35

p+b

2) peptides T-120 to T-141 and T-576, as shown in FIG. 27B, and peptides T-12, T-13, T-15, T-19, T-28 to T-30, T-66, T-69, T-70 and T-576, as shown in FIG. 27D; and

p+b

5 3) peptides T-67 and T-104 to T-119 and T-384, as shown in FIG. 28A, and peptides T-71, T-613 to T-617, T-662 to T-676 and T-730, as shown in FIG. 28B.

P The peptides of group 1 represent portions of the RSV F2 protein DP178/107-like region. The peptides of group 2 represent portions of the RSV F1 protein DP107-like region. The peptides of groups 3 represent portions of the RSV F1 protein DP178-like region.

10 P Each peptide was tested at 2-fold serial dilutions ranging from 100µg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used. The IC₅₀ data for each peptide represents the average of several experiments conducted utilizing that peptide.

CLU/C 17.2 RESULTS

20 P The data summarized in FIGS. 27A-B and 28A-B represent antiviral and structural information obtained from peptides derived from the RSV F2 DP178/DP107-like F2 region (FIG. 27A-B), the RSV F1 DP-107-like region (FIG. 27C-D) and the RSV DP178-like F2 region (FIG. 28A-B).

25 P As shown in FIGS. 27A-D, a number of the RSV DP178/DP107-like peptides exhibited a detectable level of antiviral activity. Peptides from the RSV DP178/DP107-like F2 region (FIG. 27A-B), for example, T-142 to T-145 and T-334 purified peptides, exhibited detectable levels of antiviral activity, as evidenced by their IC₅₀ values. Further, a number of RSV F1 DP107-like peptides (FIG. 27C-D) exhibited a sizable level of antiviral activity as purified peptides, including, for example, peptides T-124 to T-127, T-

131, T-135 and T-137 to T-139, as demonstrated by their low IC₅₀ values. In addition, CD analysis FIG. 27A, 27C) reveals that many of the peptides exhibit some detectable level of helical structure.

5 The results summarized in FIG. 28A-B demonstrate that a number of DP178-like purified peptides exhibit a range of potent anti-viral activity. These peptides include, for example, T-67, T-104, T-105 and T-107 to T-119, as listed in FIG. 28A, and T-665 to T-669 and T-671 to T-673, as listed in FIG. 28B. In addition,
10 some of the DP178-like peptides exhibited some level of helicity.

Thus, the computer assisted searches described, hereinabove, successfully identified viral peptide domains that represent highly promising anti-RSV
15 antiviral compounds.

CLV/L 18. EXAMPLE: POTENTIAL HUMAN PARAINFLUENZA VIRUS
TYPE 3 DP178/DP107 ANALOGS: CD AND
ANTIVIRAL CHARACTERIZATION

20 In the Example presented herein, human parainfluenza virus type 3 (HPIV3) peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 15, above, were tested for anti-HPIV3 activity.
25 Additionally, circular dichroism (CD) structural analyses were conducted on the peptides, as discussed below. It is demonstrated that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that several of
30 these peptides exhibit a substantial helical character.

CLV/L 18.1 MATERIALS AND METHODS
Structural analyses: Structural analyses
35 consisted of circular dichroism (CD) studies. The CD

spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a Jobin/Yvon Autodichrograph Mark V CD

spectrophotometer. Peptide concentrations were
5 determined from A_{280} using Edlehoch's method (1967, Biochemistry 6:1948).

ρ Anti-HPIV3 antiviral activity assays: The assay utilized herein tested the ability of the peptides to
10 disrupt the ability of Hep2 cells chronically infected with HPIV3 to fuse and cause syncytial formation on a monolayer of an uninfected line of CV-1W cells. The more potent the lower the observed level of fusion, the greater the antiviral activity of the peptide.

ρ Uninfected confluent monolayers of CV-1W cells
15 were grown in microtiter wells in 3% EMEM (Eagle Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum [FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented
20 at 3%, antibiotics/antimycotics (Gibco BRL Life Technologies Cat. No. 15040-017) added at 1%, and glutamine added at 1%.

ρ To prepare Hep2 cells for addition to uninfected cells, cultures of chronically infected Hep2 cells
25 were washed with DPBS (Dulbecco's Phosphate Buffered Saline w/o calcium or magnesium; Bio Whittaker Cat. No. 17-512F) and cell monolayers were removed with Versene (1:5000; Gibco Life Technologies Cat. No. 15040-017). The cells were spun 10 minutes and
30 resuspended in 3% FBS. Cell counts were performed using a hemacytometer. Persistent cells were added to the uninfected CV-1W cells.

ρ The antiviral assay was conducted by, first,
35 removing all media from the wells containing uninfected CV-1W cells, then adding peptides (at the

dilutions described below) in 3% EMEM, and 500 chronically HPIV3-infected Hep2 cells per well. Wells were then incubated at 37°C for 24 hours.

5 P On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a
10 dissecting microscope.

P Alternatively, instead of Crystal Violet analysis, cells were assayed with XTT, as described, ^{above} ~~above~~, in Section 17.1.

15 P Peptides: The peptides characterized in the study presented herein were:

- 1) Peptides 157 to 188, as shown in FIG. 29A, and peptides T-38 to T-40, T-42 to T-46 and T-582, as shown in FIG. 29B. These peptides are derived from the DP107 region of the HPIV3 F1 fusion protein (represented by HPF3 107, as shown in FIG. 29A); and
20
2) Peptides 189 to 210, as shown in FIG. 30A, and T-269, T-626, T-383 and T-577 to T-579, as shown in FIG. 30B. These peptides are primarily derived from the DP178 region of the HPIV3 F1 fusion protein (represented by HPF3 178, as shown in FIG. 30A). Peptide T-626 contains two mutated amino acid residues (represented by a shaded background). Additionally, peptide T-577
25
30 represents F1 amino acids 65-100, T-578 represents F1 amino acids 207-242 and T-579 represents F1 amino acids 273-309.

35 P Each peptide was tested at 2-fold serial dilutions ranging from 500µg/ml to approximately

500ng/ml. For each of the assays, a well containing no peptide was also used.

CL V/C. 18.2 RESULTS

5 The data summarized in FIGS. 29A-C and 30A-B represent antiviral and structural information obtained from peptides derived from the HPIV3 fusion protein DP107-like region (FIG. 29A-C) and the HPIV3 fusion protein DP178-like region (FIG. 30A-B).

10 As shown in FIG. 29A-B, a number of the HPIV3 DP107-like peptides exhibited potent levels of antiviral activity. These peptides include, for example, peptides T-40, T-172 to T-175, T-178, T-184 and T-185.

15 CD analysis reveals that a number of the peptides exhibit detectable to substantial level of helical structure. The CD spectra for one of the peptides, 184, which exhibits substantial helicity is summarized in FIG. 29C.

20 The results summarized in FIG. 30A-B demonstrate that a number of the DP178-like peptides tested exhibit a range of anti-viral activity. These peptides include, for example, peptides 194 to 211, as evidenced by their low IC₅₀ values. In fact, peptides 201 to 205 exhibit IC₅₀ values in the nanogram/ml
25 range. In addition, many of the DP178-like peptides exhibited some level of helicity.

30 Thus, the computer assisted searches described, hereinabove, have successfully identified viral peptide domains that represent highly promising anti-HPIV3 antiviral compounds.

CL V/C 19. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN IMMUNODEFICIENCY VIRUS

35 FIG. 31 represents search results for SIV isolate MM251 (PC/Gene® protein sequence PENV_SIVM2). Both

107x178x4 and ALLMOTI5 search motifs identified two regions with similarities to DP107 and/or DP178.

The peptide regions found by 107x178x4 were located at amino acid residues 156-215 and 277-289. The peptide regions found by ALLMOTI5 were located at amino acid residues 156-219 and 245-286. Both motifs, therefore, identify similar regions.

Interestingly, the first SIV peptide region (i.e., from amino acid residue 156 to approximately amino acid residue 219) correlates with a DP107 region, while the second region identified (i.e., from approximately amino acid residue 245 to approximately amino acid residue 289) correlates with the DP178 region of HIV. In fact, an alignment of SIV isolate MM251 and HIV isolate BRU, followed by a selection of the best peptide matches for HIV DP107 and DP178, reveals that the best matches are found within the peptide regions identified by the 107x178x4 and ALLMOTI5 search motifs.

It should be noted that a potential coiled-coil region at amino acid residues 242-282 is predicted by the Lupas program. This is similar to the observation in HIV in which the coiled-coil is predicted by the Lupas program to be in the DP178 rather than in the DP107 region. It is possible, therefore, that SIV may be similar to HIV in that it may contain a coiled-coil structure in the DP107 region, despite such a structure being missed by the Lupas algorithm. Likewise, it may be that the region corresponding to a DP178 analog in SIV may exhibit an undefined structure, despite the Lupas program's prediction of a coiled-coil structure.

35

CLV/L 20. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP178/DP107 ANALOGS IN EPSTEIN-BARR
VIRUS

The results presented herein describe the identification of DP178/DP107 analogs within two different Epstein-Barr Virus proteins. Epstein-Barr is a human herpes virus which is the causative agent of, for example, infectious mononucleosis (IM), and is also associated with nasopharyngeal carcinomas (NPC), Burkitt's lymphoma and other diseases. The virus predominantly exists in the latent form and is activated by a variety of stimuli.

FIG. 32 depicts the search motif results for the Epstein-Barr Virus (Strain B95-8; PC/Gene® protein sequence PVGLB_EBV) glycoprotein gp110 precursor (gp115). The 107x178x4 motif identified two regions of interest, namely the regions covered by amino acid residues 95-122 and 631-658. One PZIP region was identified at amino acid residue 732-752 which is most likely a cytoplasmic region of the protein. The Lupas algorithm predicts a coiled-coil structure for amino acids 657-684. No ALLMOTI5 regions were identified.

FIG. 33 depicts the search motif results for the Zebra (or EB1) trans-activator protein (BZLF1) of the above-identified Epstein-Barr virus. This protein is a transcription factor which represents the primary mediator of viral reactivation. It is a member of the b-ZIP family of transcription factors and shares significant homology with the basic DNA-binding and dimerization domains of the cellular oncogenes c-fos and C/EBP. The Zebra protein functions as a homodimer.

Search results demonstrate that the Zebra protein exhibits a single region which is predicted to be either of DP107 or DP178 similarity, and is found between the known DNA binding and dimerization regions of the protein. Specifically, this region is located

at amino acid residues 193-220, as shown in FIG. 33.
The Lupas program predicted no coiled-coil regions.

CLV/L 21. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP178/DP107 ANALOGS IN MEASLES VIRUS

5 FIG. 34 illustrates the motif search results for
the fusion protein F1 of measles virus, strain
Edmonston (PC Gene® protein sequence PVGLF_MEASE),
successfully identifying DP178/DP107 analogs.

The 107x178x4 motif identifies a single region at
10 amino acid residues 228-262. The ALLMOTI5 search
motif identifies three regions, including amino acid
residues 116-184, 228-269 and 452-500. Three regions
containing proline residues followed by a leucine
zipper-like sequence were found beginning at proline
15 residues 214, 286 and 451.

The Lupas program identified two regions it
predicted had potential for coiled-coil structure,
which include amino acid residues 141-172 and 444-483.

CLV/L 20 22. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP178/DP107 ANALOGS IN HEPATITIS B
VIRUS

FIG. 35 depicts the results of a PZIP motif
search conducted on the Hepatitis B virus subtype AYW.
Two regions of interest within the major surface
25 antigen precursor S protein were identified. The
first lies just C-terminal to the proposed fusion
peptide of the major surface antigen (Hbs) which is
found at amino acid residues 174-191. The second
region is located at amino acid residues 233-267. The
30 Lupas program predicts no coiled-coil repeat regions.

In order to test the potential anti-HBV antiviral
activity of these D178/DP107 analog regions, peptides
derived from area around the analog regions are
synthesized, as shown in FIG. 52A-B. These peptides
35 represent one amino acid peptide "walks" through the

putative DP178/DP107 analog regions. The peptides are synthesized according to standard Fmoc chemistry on Rinkamide MBHA resins to provide for carboxy terminal blockade (Chang, C.D. and Meinhofer, J., 1978, Int. J. Pept. Protein Res. 11:246-249; Fields, G.B. and Noble, R.L., 1990, Int. J. Pept. Protein Res. 35:161-214). Following complete synthesis, the peptide amino-terminus is blocked through automated acetylation and the peptide is cleaved with trifluoroacetic acid (TFA) and the appropriate scavengers (King, D.S. et al., 1990, Int. J. Pept. Res. 36:255-266). After cleavage, the peptide is precipitated with ether and dried under vacuum for 24 hours.

The anti-HBV activity of the peptides is tested by utilizing standard assays to determine the test peptide concentration required to cause an acceptable (e.g., 90%) decrease in the amount of viral progeny formed by cells exposed to an HBV viral inoculum. Candidate antiviral peptides are further characterized in model systems such as wood chuck tissue culture and animal systems, prior to testing on humans.

23. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS IN SIMIAN MASON-PFIZER MONKEY VIRUS

The results depicted herein illustrate the results of search motifs conducted on the Simian Mason-Pfizer monkey virus. The motifs reveal DP178/DP107 analogs within the enveloped (TM) protein GP20, as shown in FIG. 36.

The 107x178x4 motifs identifies a region at amino acid residues 422-470. The ALLMOTI5 finds a region at amino acid residues 408-474. The Lupas program predicted a coiled-coil structure a amino acids 424-459.

CLV/L. 24. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF
DP178/DP107 ANALOGS IN BACTERIAL
PROTEINS

The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to sequences present in proteins of a variety of bacterial species.

FIG. 37 depicts the search motif results for the *Pseudomonas aeruginosa* fimbrial protein (Pilin). Two regions were identified by motifs 107x178x4 and ALLMOTI5. The regions located at amino acid residues 30-67 and 80-144 were identified by the 107x178x4 motif. The regions at amino acid residues 30-68 and 80-125 were identified by the ALLMOTI5.

FIG. 38 depicts the search motif results for the *Pseudomonas gonorrhoeae* fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 66-97 was identified by the 107x178x4 motif. The region located at amino acid residues 66-125 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 39 depicts the search motif results for the *Hemophilus Influenza* fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 40 depicts the search motif results for the *Staphylococcus aureus* toxic shock syndrome *Hemophilus Influenza* fimbrial protein (Pilin). A single region was identified by both the 107x178x4 and the ALLMOTI5 motifs. The region located at amino acid residues 102-129 was identified by the 107x178x4 motif. The

region located at amino acid residues 102-148 were identified by the ALLMOTI5 search motif. No coiled-coil regions were predicted by the Lupas program.

FIG. 41 summarizes the motif search results conducted on the Staphylococcus aureus enterotoxin Type E protein. These results demonstrate the successful identification of DP178/DP107 analogs corresponding to peptide sequences within this protein, as described below.

The ALLMOTI5 motif identified a region at amino acid residues 22-27. The 107x178x4 motif identified two regions, with the first at amino acid residues 26-69 and the second at 88-115. A P12LZIPC motif search identified two regions, at amino acid residues 163-181 and 230-250.

The Lupas program predicted a region with a high propensity for coiling at amino acid residues 25-54. This sequence is completely contained within the first region identified by both ALLMOTI5 and 107x178x4 motifs.

FIG. 42 depicts the search motif results conducted on a second Staphylococcus aureus toxin, enterotoxin A. Two regions were identified by the ALLMOTI5 motif, at amino acid residues 22-70 and amino acid residues 164-205. The 107x178x4 motif found two regions, the first at amino acid residues 26-69 and the second at amino acid residues 165-192. A P23LZIPC motif search revealed a region at amino acid residues 216-250. No coiled-coil regions were predicted by the Lupas program.

FIG. 43 shows the motif search results conducted on the E. coli heat labile enterotoxin A protein, demonstrating that identification of DP178/DP107 analogs corresponding to peptides located within this protein. Two regions were identified by the ALLMOTI5 motif, with the first residing at amino acid residues

55-115, and the second residing at amino acid residues 216-254. The 107x178x4 motif identified a single region at amino acid residues 78-105. No coiled-coil regions were predicted by the Lupas program.

CLV/L 5 25. EXAMPLE: COMPUTER-ASSISTED IDENTIFICATION OF DP178/DP107 ANALOGS WITHIN VARIOUS HUMAN PROTEINS

10 The results presented herein demonstrate the identification of DP178/DP107 analogs corresponding to peptide sequences present within several different human proteins.

15 FIG. 44 illustrates the search motif results conducted on the human c-fos oncoprotein. The ALLMOTI5 motif identified a single region at amino acid residues 155-193. The 107x178x4 motif identified one region at amino acid residues 162-193. The Lupas program predicted a region at amino acid residues 148-201 to have coiled-coil structure.

20 FIG. 45 illustrates the search motif results conducted on the human lupus KU autoantigen protein P70. The ALLMOTI5 motif identified a single region at amino acid residues 229-280. The 107x178x4 motif identified one region at amino acid residues 235-292. The Lupas program predicted a region at amino acid residues 232-267 to have coiled-coil structure.

25 FIG. 46 illustrates the search motif results conducted on the human zinc finger protein 10. The ALLMOTI5 motif identified a single region at amino acid residues 29-81. The 107x178x4 motif identified one region at amino acid residues 29-56. A P23LZIPC motif search found a single region at amino acid residues 420-457. The Lupas program predicted no coiled-coil regions.

35

CLV/L 26. EXAMPLE: POTENTIAL MEASLES VIRUS DP178/DP107
ANALOGS: CD AND ANTIVIRAL
CHARACTERIZATION

5 In the Example presented herein, measles (MeV) virus DP178-like peptides identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9 and 21, above, are tested for anti-MeV activity. Additionally, circular dichroism (CD) structural analyses are conducted on the peptides, as discussed below. It is demonstrated
10 that several of the identified peptides exhibit potent antiviral capability. Additionally, it is shown that none of the these peptides exhibit a substantial helical character.

CLV/L 15 26.1 MATERIALS AND METHODS

P Structural analyses: The CD spectra were measured in a 10mM sodium phosphate, 150mM sodium chloride, pH 7.0, buffer at approximately 10mM concentrations, using a 1 cm pathlength cell on a
20 Jobin/Yvon Autodichrograph Mark V CD spectrophotometer. Peptide concentrations were determined from A₂₈₀ using Edlehoch's method (1967, Biochemistry 6:1948).

P Anti-MeV antiviral activity syncytial reduction assay:
25 The assay utilized herein tested the ability of the peptides to disrupt the ability of Vero cells acutely infected with MeV (i.e., cells which are infected with a multiplicity of infection of 2-3) to fuse and cause syncytial formation on a monolayer of
30 an uninfected line of Vero cells. The more potent the peptide, the lower the observed level of fusion, the greater the antiviral activity of the peptide.

P Uninfected confluent monolayers of Vero cells were grown in microtiter wells in 10% FBS EMEM (Eagle
35 Minimum Essential Medium w/o L-glutamine [Bio Whittaker Cat. No. 12-125F], with fetal bovine serum

[FBS; which had been heat inactivated for 30 minutes at 56°C; Bio Whittaker Cat. No. 14-501F) supplemented at 10%, antibiotics/antimycotics (Bio Whittaker Cat. No. 17-602E) added at 1%, and glutamine added at 1%.

5 P To prepare acutely infected Vero cells for addition to the uninfected cells, cultures of acutely infected Vero cells were washed twice with HBSS (Bio Whittaker Cat. No. 10-543F) and cell monolayers were removed with trypsin (Bio Whittaker Cat. No. 17-161E).
10 Once cells detached, media was added, any remaining clumps of cells were dispersed, and hemacytometer cell counts were performed.

P The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the
15 dilutions described below) in 10% FBS EMEM, and 50-100 acutely MeV-infected Vero cells per well. Wells were then incubated at 37°C for a maximum of 18 hours.

P On day 2, after cells in control wells were checked for fusion centers, media was removed from the
20 wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were
25 then counted, using a dissecting microscope.

P Anti-MeV antiviral activity plaque reduction assay: The assay utilized herein tested the ability of the peptides to disrupt the ability of MeV to
30 infect permissive, uninfected Vero cells, leading to the infected cells' fusing with uninfected cells to produce syncytia. The lower the observed level of syncytial formation, the greater the antiviral activity of the peptide.

P Monolayers of uninfected Vero cells are grown as
35 described above.

The antiviral assay was conducted by, first, removing all media from the wells containing uninfected Vero cells, then adding peptides (at the dilutions described below) in 10% FBS EMEM, and MeV stock virus at a final concentration of 30 plaque forming units (PFU) per well. Wells were then incubated at 37°C for a minimum of 36 hours and a maximum of 48 hours.

On day 2, after cells in control wells were checked for fusion centers, media was removed from the wells, followed by addition, to each well, of approximately 50µl 0.25% Crystal Violet stain in methanol. Wells were rinsed twice with water immediately, to remove excess stain and were then allowed to dry. The number of syncytia per well were then counted, using a dissecting microscope.

Peptides: The peptides characterized in the study presented herein were peptides T-252A0 to T-256A0, T-257B1/C1, and T-258B1 to T-265B0, and T-266A0 to T-268A0, as shown in FIG. 47. These peptides represent a walk through the DP178-like region of the MeV fusion protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100µg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

CLV/C 26.2 RESULTS

The data summarized in FIG. 47 represents antiviral and structural information obtained via "peptide walks" through the DP178-like region of the MeV fusion protein.

As shown in FIG. 47, the MeV DP178-like peptides exhibited a range of antiviral activity as crude peptides. Several of these peptides were chosen for purification and further antiviral characterization.

The IC₅₀ values for such peptides were determined, as shown in FIG. 47, and ranged from 1.35µg/ml (T-257B1/C1) to 0.072µg/ml (T-265B1). None of the DP178-like peptides showed, by CD analysis, a detectable level of helicity.

5 Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-MeV antiviral compounds.

10

CLV/L 27. EXAMPLE: POTENTIAL SIV DP178/DP107 ANALOGS:
ANTIVIRAL CHARACTERIZATION

In the Example presented herein, simian immunodeficiency virus (SIV) DP178-like peptides
15 identified by utilizing the computer-assisted search motifs described in the Examples presented in Sections 9, 12 and 19, above, were tested for anti-SIV activity. It is demonstrated that several of the identified peptides exhibit potent antiviral
20 capability.

CLV/L 27.1 MATERIALS AND METHODS

Anti-SIV antiviral assays: The assay utilized herein were as reported in Langolis et al. (Langolis,
25 A.J. et al., 1991, AIDS Research and Human Retroviruses 7:713-720).

Peptides: The peptides characterized in the study presented herein were peptides T-391 to T-400, as shown in FIG. 48. These peptides represent a walk
30 through the DP178-like region of the SIV TM protein.

Each peptide was tested at 2-fold serial dilutions ranging from 100µg/ml to approximately 100ng/ml. For each of the assays, a well containing no peptide was also used.

35

CL V/C. 27.2 RESULTS

The data summarized in FIG. 48 represents antiviral information obtained via "peptide walks" through the DP178-like region of the SIV TM protein.

5 As shown in FIG. 48, peptides T-391 to T-400 were tested and exhibited a potent antiviral activity as crude peptides.

10 Thus, the computer assisted searches described, hereinabove, as in for example, the Example presented in Section 9, for example, successfully identified viral peptide domains that represent highly promising anti-SIV antiviral compounds.

CL V/C 28. EXAMPLE: ANTI-VIRAL ACTIVITY OF DP107 AND DP-178 PEPTIDE TRUNCATIONS AND MUTATIONS

15 The Example presented in this Section represents a study of the antiviral activity of DP107 and DP178 truncations and mutations. It is demonstrated that several of these DP107 and DP178 modified peptides exhibit substantial antiviral activity.

20 CL V/C 28.1 MATERIALS AND METHODS

P Anti-HIV assays: The antiviral assays performed were as those described, above, in Section 6.1. Assays utilized HIV-1/IIIB and/or HIV-2 NIHZ isolates. 25 Purified peptides were used, unless otherwise noted in FIGS. 49A-C.

P Peptides: The peptides characterized in the study presented herein were:

- P 1) 30 FIGS. 49A-C present peptides derived from the region around and containing the DP178 region of the HIV-1 BRU isolate. Specifically, this region spanned from gp41 amino acid residue 615 to amino acid residue 717. The peptides listed contain 35 truncations of this region and/or mutations

5 + Ptb 2)

which vary from the DP178 sequence amino acid sequence. Further, certain of the peptides have had amino- and/or carboxy-terminal groups either added or removed, as indicated in the figures; and
10 FIG. 50. presents peptides which represent truncations of DP107 and/or the gp41 region surrounding the DP107 amino acid sequence of HIV-1 BRU isolate. Certain of the peptides are unblocked or biotinylated, as indicated in the figure.

Blocked peptides contained an acyl N-terminus and an amido C-terminus.

CL v/c. 28.2 RESULTS

15 Anti-HIV antiviral data was obtained with the group 1 DP178-derived peptides listed in FIG. 49A-C. The full-length, non-mutant DP178 peptide (referred to in FIG. 49A-C as T20) results shown are for 4ng/ml.

20 In FIG. 49A, a number of the DP178 truncations exhibited a high level of antiviral activity, as evidenced by their low IC_{50} values. These include, for example, test peptides T-50, T-624, T-636 to T-641, T-645 to T-650, T-652 to T-654 and T-656. T-50 represents a test peptide which contains a point
25 mutation, as indicated by the residue's shaded background. The HIV-1-derived test peptides exhibited a distinct strain-specific antiviral activity, in that none of the peptides tested on the HIV-2 NIHZ isolate demonstrated appreciable antti-HIV-2 antiviral
30 activity.

35 Among the peptides listed in FIG. 49B, are test peptides representing the amino (T-4) and carboxy (T-3) terminal halves of DP178 were tested. The amino terminal peptide was not active ($IC_{50} > 400 \mu g/ml$) whereas the carboxy terminal peptide showed potent antiviral

activity ($IC_{50} = 3\mu g/ml$). A number of additional test peptides also exhibited a high level of antiviral activity. These included, for example, T-61/T-102, T-217 to T-221, T-235, T-381, T-677, T-377, T-590, T-378, T-591, T-271 to T-272, T-611, T-222 to T-223 and T-60/T-224. Certain of the antiviral peptides contain point mutations and/or amino acid residue additions which vary from the DP178 amino acid sequence.

In FIG. 49C, point mutations and/or amino and/or carboxy-terminal modifications are introduced into the DP178 amino acid sequence itself. As shown in the figure, the majority of the test peptides listed exhibit potent antiviral activity.

Truncations of the DP107 peptide (referred to in IG. 50 as T21) were also produced and tested, as shown in FIG. 50. FIG. 50 also presents data concerning blocked and unblocked peptides which contain additional amino acid residues from the gp41 region in which the DP107 sequence resides. Most of these peptides showed antiviral activity, as evidenced by their low IC_{50} values.

Thus, the results presented in this Section demonstrate that not only do the full length DP107 and DP178 peptides exhibit potent antiviral activity, but truncations and/or mutant versions of these peptides can also possess substantial antiviral character.

CL U/L 29: EXAMPLE: POTENTIAL EPSTEIN-BARR DP178/DP107
ANALOGS: ANTIVIRAL CHARACTERIZATION

In the Example presented herein, peptides derived from the Epstein-Barr (EBV) DP-178/DP107 analog region of the Zebra protein identified, above, in the Example presented in Section 20 are described and tested for anti-EBV activity. It is demonstrated that among these peptides are ones which exhibit potential antiviral activity.

CLV/L

29.1 MATERIALS AND METHODS

Electrophoretic Mobility Shift Assays (EMSA):

Briefly, an EBV Zebra protein was synthesized utilizing SP6 RNA polymerase in vitro transcription and wheat germ in vitro translation systems (Promega Corporation recommendations; Butler, E.T. and Chamberlain, M.J., 1984, J. Biol. Chem. 257:5772; Pelham, H.R.B. and Jackson, R.J., 1976, Eur. J. Biochem. 67:247). The in vitro translated Zebra protein was then preincubated with increasing amounts of peptide up to 250 ng/ml prior to the addition of 10,000 to 20,000 c.p.m. of a ³²P-labeled Zebra response element DNA fragment. After a 20 minute incubation in the presence of the response element, the reaction was analyzed on a 4% non-denaturing polyacrylamide gel, followed by autoradiography, utilizing standard gel-shift procedures. The ability of a test peptide to prevent Zebra homodimer DNA binding was assayed by the peptide's ability to abolish the response element gel migration retardation characteristic of a protein-bound nucleic acid molecule.

Peptides: The peptides characterized in this study represent peptide walks through the region containing, and flanked on both sides by, the DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. Specifically, the peptide walks covered the region from amino acid residue 173 to amino acid residue 246 of the EBV Zebra protein.

Each of the tested peptides were analyzed at a range of concentrations, with 150ng/ml being the lowest concentration at which any of the peptides exerted an inhibitory effect.

CL v/c 29.2 RESULTS

5 The EBV Zebra protein transcription factor contains a DP178/DP107 analog region, as demonstrated in the Example presented, above, in Section 20. This protein appears to be the primary factor responsible for the reactivation capability of the virus. A method by which the DNA-binding function of the Zebra virus may be abolished may, therefore, represent an effective antiviral technique. In order to identify potential anti-EBV DP178/DP107 peptides, therefore, 10 peptides derived from the region identified in Section 20, above, were tested for their ability to inhibit Zebra protein DNA binding.

15 The test peptides' ability to inhibit Zebra protein DNA binding was assayed via the EMSA assays described, above, in Section 28.1. The data summarized in FIG. 51A-B presents the results of EMSA assays of the listed EBV test peptides. These peptides represent one amino acid "walks" through the region containing, and flanked on both sides by, the 20 DP178/DP107 analog region identified in the Example presented in Section 20, above, and shown as shown in FIG. 33. As shown in FIG. 51A-B, the region from which these peptides are derived lies from EBV Zebra protein amino acid residue 173 to 246. A number of 25 the test peptides which were assayed exhibited an ability to inhibit Zebra protein homodimer DNA binding, including 439, 441, 444 and 445.

30 Those peptides which exhibit an ability to inhibit Zebra protein DNA binding represent potential anti-EBV antiviral compounds whose ability to inhibit EBV infection can be further characterized.

35 The present invention is not to be limited in scope by the specific embodiments described which are intended as single illustrations of individual aspects

of the invention, and functionally equivalent methods
and components are within the scope of the invention.
Indeed, various modifications of the invention, in
addition to those shown and described herein will
become apparent to those skilled in the art from the
5 foregoing description and accompanying drawings. Such
modifications are intended to fall within the scope of
the appended claims.

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